PROFESSIONALISM, ITS DETERMINANTS AND THE MEDIATION ROLE OF JOB SATISFACTION: APPLICATION OF SOCIAL COGNITIVE THEORY IN NURSING

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Under the guidance of

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2020

DEDICATION

In loving memory of my

late loving Parents,

MR. ANTONIO VAZ
&
MRS. ANGELINA VAZ

who exemplified the path of sincierity,

perseverance and endurance

and took pride

in high academic achievements of their children.

DECLARATION

I, Ms Vaz Ana Maria Josepina, do hereby declare that this dissertation titled "Professionalism, its Determinants and the Mediation Role of Job Satisfaction: Application of Social Cognitive Theory in Nursing" is a record of original research work done by me under the supervision of Dr. R. Nirmala, Associate Professor, Goa Business School, Goa University.

I also declare that this dissertation or any part thereof has not been submitted by me for the award of any Degree, Diploma, Title or Recognition before.

Place: Goa Business School, Goa University.

Date: Vaz Ana Maria Josepina

CERTIFICATE

This is to certify that the Ph.D. thesis titled "Professionalism, its Determinants and the Mediation Role of Job Satisfaction: Application of Social Cognitive Theory in Nursing", is an original work carried out by Ms. Vaz Ana maria Josepina under my guidance, at Goa Business School, Goa University. This dissertation or any part thereof has not formed the basis for the award of any Degree, Diploma, Title or Recognition before.

<div align="right">
Dr. R. Nirmala
Supervisor
</div>

Place: Goa Business School, Goa University

Date: _____

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"Showing gratitude is one of the simplest yet most powerful things humans can do for each other"

… Randy Pausch

I praise and thank the Almighty for his constant love, care and abundant blessings. He has been the fountain of strength, perseverance and guidance throughout this academic venture.

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"I will see the goodness of the LORD in the land of the living".

<div align="right">Psalm 27:13</div>

- Vaz Ana Maria Josepina

ABSTRACT

Professionalism serves as a means for categorizing the work, controlling the workers and is related to the quality of practice. It holds significant value to every professional, from the entry day into the profession until their retirement from active practice and is imperative for winning the trust of clients and society at large. This study focuses on identifying the influence of the determinants on professionalism among nurses through the application of social cognitive theory.

Research gaps identified through literature on nursing professionalism indicated the need to explore nurses' perceptions about the multiple internal and external factors; such as nurses' working conditions or work environment, consumers', familys' and society's views, different levels of experience in variety of clinical settings and nurses' personal background influencing their professionalism in the perspective of the contemporary society. This study also considered to explore the interaction effects of the determinants on professionalism, mediation role of job satisfaction and the moderation influence of the nurses' personal factors on the different relationships.

The tools used in the data collection process were the Nurses' Perception about Stakeholders' Image of a Nurse Scale, Nurse Practice Environment Scale, Emotional Intelligence Scale, Job satisfaction Scale and the Nurse professionalism Scale. Multistage sampling technique was used to select 1057 registered nurses employed in different work areas within three different health sectors of the state. Data received from 749 respondents were analysed using SPSS version 25 and Structural Equation Modeling in AMOS version 22. Measurement models and structural models were tested and findings were interpreted in view of the study objectives.

Analysis of data revealed the following findings:

- There was significant difference in the nurses' perception about the stakeholders' image of a nurse.

- Nurses' perception about doctors' and other hospital staffs' image of a nurse, image of a nurse, nurse practice environment and emotional intelligence have

significant positive influence on professionalism among nurses. Whereas, nurses' perception about patients' and self image of a nurse does not have significant influence on professionalism among nurses.

- Nurse practice environment and emotional intelligence have significant positive influence on the job satisfaction among nurses. However, nurses' perception about stakeholders' image of a nurse does not have significant influence on the job satisfaction among nurses.

- Job satisfaction has a significant positive influence on professionalism among nurses.

- The interaction between nurses' perception about doctors' image of a nurse and nurse practice environment, nurses' perception about patients' image of a nurse and nurse practice environment, and emotional intelligence and nurses' perception about patients' image of a nurse have significant influence on professionalism among nurses.

- Job satisfaction fully mediates the relationship between nurse practice environment and professionalism among nurses and partially mediates the relationship between emotional intelligence and professionalism among nurses. There is no mediation effect of job satisfaction on the relationship between the perceived stakeholders' image of a nurse and professionalism.

- There were significant moderation effects of religion, marital status, and qualification, area of work, experience, employment status and sector of health care on the relationships at model and or at different path levels. However, age, gender and level of health care organisation did not moderate any relationships.

In light of the study findings, managerial implications have been discussed and directions for future research have been suggested.

Keywords: Professionalism, social cognitive theory, stakeholders' image, nurse practice environment, emotional intelligence, job satisfaction.

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ABBREVIATIONS

AGFI	Adjusted Goodness of Fit Index
AMOS	Analysis of Moment Structures
ANA	American Nurses Association
AVE	Average Variance Extracted
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CLF	Common Latent Factor
CMB	Comon Method Bias
CAN	Canadian Nurses Association
Com	Community
CPCNI-INC	Code of Professional Conduct for Nurses in India: Indian Nursing Council
CR	Construct Reliability
C.R.	Critical Ratio
CVI	Content Validity Index
D-CVI	Dimension Content Validity Index
DHS	Directorate of Health Services
E	Intensive Care Unit/Operation Theatre/Casualty
EFA	Exploratory Factor Analysis
EI	Emotional Intelligence
GFI	Goodness of Fit Index
GMCH	Goa Medical College and Hospitals
I-CVI	Item Content Validity Index
IFI	Incremental Fit Index
J_Sat	Job Satisfaction
M	Medicine
NABH	National Accreditation Board for Hospitals and Healthcare Providers
NFI	Normal Fit Index
NPS	Nurse Professionalism Scale
NP-SIN	Nurses' Perception about Stakeholders' Image of a Nurse
NP-DIN	Nurses' Perception about Doctors' Image of a Nurse
NP-PIN	Nurses' Perception about Patients' Image of a Nurse
NP-OHSIN	Nurses' Perception about Other Hospital Staffs' Image of a Nurse
NP-IN	Nurses' Perceived Image of a Nurse

OG	Obstetrics and Gynecology
P	Probability
PCLOSE	Closeness of fit
Ped	Pediatrics
Psy	Psychiatry
RMR	Root Mean Square Residual
RMSEA	Root Mean Square Error of Approximation
RNAO -BPG	Registered Nurses Association, Ontario Best Practice Guidelines
S	Surgery
SCT	Social Cognitive Theory
S-CVI	Scale - Content Validity Index
SDR	Social Desirability Responding
SE	Standard Error
SEM	Structural Equation Modeling
SPSS	Statistical Package for Social Sciences
TLI	Tucker Lewis Index
VIF	Variance Inflation Factor

CHAPTER 1

INTRODUCTION

"Behavior is the mirror in which everyone displays his own image."

Johann Wolfgang Von Goethe

Professionalism serves as the foundation of and for every member of a profession. It is a unique means of categorizing the work, controlling the workers and is related to the quality of practice. Over the past two decades professionalism has received significant attention due to the influence of emergent commercialization, advent of high technology and a rigid competition for survival. Consumers also hold high expectations due to the mounting awareness and access to information. Professionalism holds significant value to every professional from the entry date into the profession until their retirement from active practice, and is imperative for winning the trust of clients and the society at large.

1.1   BACKGROUND AND SIGNIFICANCE

Individuals till date work in occupations and learn by doing and performing tasks that are assigned to them based on the knowledge gained on the job. They labour under supervision accepting the philosophical base of that occupation of **"making the customer happy"**. Occupations began as simple, fundamental survival tasks. These tasks performers progressed to skilled labourers. Further, the skilled workers learnt the trade through repetition of tasks or under the guidance of a master tradesman. Several professions have evolved from such simple beginnings. The first such identified professions are law, the ministry and medicine (Revell, 2013).

A **"PROFESSION"** is a definite type of occupation, in which one performs tasks based on special characteristics whilst competing for social, economic, and or political rewards. It enjoys the relative autonomy that is derived from the character of the work executed and from the professional relationship that is sustained as long as the professional expectations are fulfilled (Freidson, 1998). Professions are based on the core values and a body of knowledge which endows the professionals with expertise on

ways for implementing those values (Grunig, 2000). Though they constantly reflect the scrupulous social and cultural milieus in which they function, rapid advancement of knowledge over the past few years has brought about changes in the nature of every profession (Swick, 2000).

Profession is a public affirmation with the force of a promise and is pursued for higher motives and appropriate standards. And its members, the **"PROFESSIONAL"**s are defined in the milieu of specified body of knowledge obtained through prescribed education, level of skill and certification which confirms entry into the profession. They are required to demonstrate behavioral standards and attitudes that represent commitment towards and recognition with a particular profession (Yang, Li, & Li, 2016). Professionals pledge to act in definite ways that benefits the society (Kalasuramath & VinodKumar, 2016) and are comprehensively engaged in managing the risks and use their expert knowledge in enabling clients and customers to deal with uncertainties (Evetts, 2003). They also exhibit high levels of such characteristics as expertise, autonomy, belief in the regulation of the profession and belief in the importance of professional service provision (Blau, 1999). The demonstration of these behavioural norms or standards is termed as **"PROFESSIONALISM".**

The concept of **"PROFESSIONALISM"** evolved in the 5th century B.C. with the development of the "Hippocratic Oath of Medical Ethics". Towards the closing of the 19th century, discussion on profession was mostly limited to law, religion and medicine. Today it includes various professions such as accountancy, architecture, art, dentistry, library, journalism, media and press, physical therapy, social science, social work, teaching etc. Most of these occupations enjoy public respect which bestows them with the autonomy while practicing their profession with limited interference from employers or clients (Grunig, 2000).

1.2   DEFINITION OF PROFESSIONALISM IN THE CONTEXT OF DIFFERENT PROFESSIONS

The term **"PROFESSIONALISM"** is an indefinable, multi-dimensional concept requiring a multi-pronged approach. It has no solitary simple, compact, generalizable definition and is interpreted differently in different occupational and professional domains (Adkoli, 2016). It differs from the bureaucratic, managerial and

hierarchical controls of commercial and industrial organizations (Evetts, 2013). It is described by its individual, inter-personal and societal dimensions and the interactions amongst these dimensions (Al-Sudani, Al-Abbas, Al-Bannawi, & Al-Ramadhan, 2013). Hammer (2000) defined it as a set of behaviours and attitudes that are considered as appropriate to a specific occupation and the degree to which the professional exhibits the characteristics of that profession. As a pharmaceutical professional, he further stated that professionalism is demonstrated through the manner in which pharmacists behave during professional situations. Hill (2000) defined professionalism as the vigorous demonstration of the features of a professional. It is also described as constituting attitudes and behaviors which are focused towards maintaining client interest over self-interest and the display of beliefs, values and attitudes that place others' needs above individual's personal needs (Beardsley 1996, as cited by Hammer, 2000). It is the qualities or the characteristics such as competence, skills and code of behavior that are directed towards maintaining the dignity and values of a profession (Swick, 2000). It refers to achievement and performance of scholarly activities and standards of behavioral conduct (Koenig et al., 2003) that define the professional and the profession (Evans, 2008). Health-care providers exhibit professionalism through knowledge, attitude and behaviour that reflect the principles, policies and standards mandatory towards successful professional practice (Tanaka, Yonemitsu, & Kawamoto, 2014). It is "the degree of dedication displayed by individuals regarding the values and behavioral attributes of a specific career identity" (Dikmen, Karataş, Arslan, & Bedriye, 2016).

Professionalism is "the conceptualization of obligations, attributes, interactions, attitudes, and role behaviors required of professionals in relationship to individual clients and to society as a whole" (Fantahun et al., 2014). In 2012, the "American Board of Medical Specialties (ABMS) Standing Committee on Ethics and Professionalism" articulated a definition that explains "professionalism as the motivating force for an occupational group to come together and create, publicly profess, and develop reliable mechanisms to enforce shared promises—all with the purpose of ensuring that practitioners are worthy of clients' and public trust". In the domain of physical therapy it is defined as including "those aspects of the occupational control of work which are in the best interests of customers, clients and patients, as well as in the advice-giving, lobbying and sometimes oppositional aspects of professions' relations with states, legislative bodies, and regional and local administrative agencies" (Kumar, Sisodia, &

Jacob, 2013). Further, Yadav et al., (2019) describes professionalism as "a body of qualities or behavior characteristics of a profession and an outward visible expression of acceptable behaviour of a professional group that reveals the professionals' values, what the professionals stand for, how the professionals behave and perform".

"Professionalism holds a set of attitudes and attributes, skills and behaviors and values which are expected from the professionals, whom society considers as experts" (Duphily, 2014). It is considered as "a set of intrinsic values manifested as extrinsic behaviours with justification between patients and good doctors, and between the public and the medical profession (Kumar, Scott, Rajendiran, & VijayaRaghavan, 2015). However, the definition has been inconsistent and evolving over time and across space. In general professionalism can be summed up as manifestation of the features, behavior, values and commitments that characterize a particular profession (Mahajan et al., 2016). Belief in professionalism mandates the acceptance of the premise that health care professionals ought to come together in order to continually debate, define, distribute, declare and enforce the collective ethical values and competency standards that govern the work among professionals (Wynia, Papadakis, Sullivan, & Hafferty, 2014).

Defining professionalism in this ever-changing, developing world is not simple. It is evolving from the proficient opinion to evidence-based practice, from autonomy to accountability, and from self-interest to team collaboration and shared responsibility (Haque et al., 2016). Professionals face a number of societal and policy changes and developments, as well as increased complexities in the domains and the professional environments (Evetts, 2013). Hence, they are required to aim at the highest possible standards of performance and endeavour to produce outcomes in which they can take pride in. Professional responsibility, self-improvement and adaptability, relationships with clients, and relationships with members of the team are the important aspects of professionalism (Papadakis, Osborn, Cooke, & Healy, 1999). It is an indispensable element in the contract between the profession and society and is based on trust and placement of patients needs above all other considerations (Brennan & Monson, 2014). Thus a profession encompasses a societal contract and grants a monopoly over the utilisation of a body of knowledge and privilege of self-regulation, in return, mandates the assurance of integrity, professional competence and provision of altruistic service (Cruess, Johnston, & Cruess, 2002; Kirk, 2007). It is about, managing the external and

internal environment and balancing expectations to an optimum height through the application of highest standards in the performance for the primary benefit of society (Mahboob, 2014).

In the health care industry, the quality of client care is greatly dependent on the behavior of physicians and nurses. Although commitment to quality patient care is firmly beached in the professional and ethical base of respective professions, concepts about how this commitment should be translated in promising and improving patient quality of care has been changed over the past decades. This is due to the explosion of medical knowledge, amplified accountability, cost containment, rising demands and establishment of quality improvement research. "Physician Charter" for physicians and the "Code of Professional Conduct and the Code of Ethics" for nurses serve as leading documents that outline the professional standards for these two inevitable health care professionals (Lombarts et al., 2014). "The Royal College of Physicians" (2005) remarked that the beneficiaries of these standards; so called professionalism are not just patients, but all healthcare professionals and, eventually, the whole society. Thus, an effort to promote professionalism in every healthcare setting emphasizes the attainments of professional qualities, beyond their requisite medical knowledge and clinical skills by every physician and nurse (San-Martín, Delgado-Bolton, & Vivanco, 2017).

1.3 SIGNIFICANCE OF PROFESSIONALISM IN NURSING

Nurses are the largest and the most diverse human resource in the health care system. The expanding and extending role of these pillars include safe, affordable and quality service delivery to all the consumers at various levels of health care system (Suresh, 2013). Nursing services focus on the provision of competent and ethically safe care through compassion and collaboration with consumers and their family, community and the overall health care team. The aim is comprehensive health care which will result in disease prevention, health promotion and restorative care across health care settings (NABH, 2013).

Professionalism, a universal term is used to portray numerous professions, however in the nursing profession, it refers to nurse behaviours such as "accountability, autonomy, belief in public service, self-regulation and a sense of vocation" (Wynd,

2003). Nurses' professionalism centres on the expansion and extension of their roles in the swiftly changing and diverse practice environment. It reflects an approach wherein nurses scrutinize their cognition and dexterity which serves as a guide in ensuring client safety and quality care practices (Dikmen, Karataş, Arslan, & Bedriye, 2016). Professionalism enforces nurses to demonstrate professional standards in every role, from patient care to collaboration with members of the health care team (Registered Nurses Association of Ontario, 2007).

Highlighting the significance for a scientific background in nursing professionalism; Miller (1988) devised the "Wheel of Professionalism in Nursing Model". The centre of the wheel signifies university level education and a scientific background. The spokes represent other features defining nursing professionalism such as "research development, use and evaluation; publication and communication; participation in professional organizations; competence and continuing education; theory development, use and evaluation; community service orientation; self-regulation and autonomy and adherence to the ANA Code of Ethics". According to RNAO (2007) nursing professionalism includes "knowledge, spirit of inquiry, accountability, autonomy, advocacy, innovation and visionary, collaboration and collegiality and ethics". Hwang et al., (2009) acknowledged that nurses' practice involves "commitment to compassion, caring and strong ethical values; continuous development of self and others; accountability and responsibility for insightful practice; demonstrating a spirit of collaboration and flexibility". Çelik and Hisar (2012) and Yang, Li, and Li (2016) documented the essential attributes as "educational preparation, research and scholarship participation in professional organizations, community service, competence and continuing education, the code of nurses, theory, and autonomy" that distinguish nurses from other workers.

Nurses who value the profession work towards the achievement of competence and uphold the practice standards. However, despite the central role, nurses remain unrecognized in the health care delivery system (Suresh, 2013). They encounter number of challenges such as swift changes in practice standards, diversity in population and the illness patterns, membership, communication, lack of leadership and autonomy, health care risks, stressful and long working hours, emotional burnout, lack of recognition, shortage and restricted professional opportunities (Solomon, Beker, & Belachew, 2015),

educational level, nature and schedule of work, societal customs and expectations, changes in the health care organizations and the overall system (Revell, 2013), generating hurdles in the development of profession (Suresh, 2013).

The contemporary focus is on delivery of quality care, patient satisfaction, transformation of public image and the achievement of the health indicators in Millennium Developmental Goals (Oweis, 2005), effectual collaboration among the team, favourable patient outcomes and complimentary job satisfaction (RNAO, 2007). Professionalism is the means to achieve the goals in every health care delivery setting (CNA, 2008). It is about the meaningfulness of nursing practice and the strive towards achievement of the expected goals as licensed members of the profession (Stewart, 2015). This essence of the profession endorses improvement of nurses' image which might get acknowledged by the consumers, media, colleagues and professionals themselves (CNA, 2008). Nursing professionalism mirrors the manner in which their practice is being viewed and serves as a guide in ensuring safe and quality patient care. The professionals must exhibit professionalism towards the contribution in the healthcare system which is crucial for the achievements in and for the development of the profession (Skela-Savic, 2016).

1.4   STATEMENT OF RESEARCH PROBLEM

Nurses should have been considered as partners in health care with different yet complementary services. However, nursing is accepted as a lower and female dominated profession as compared to male dominated medical profession and nurses as subordinate to doctors in most of the health care settings. Another important feature is the internal discrepancy within the profession. The higher qualified nurses choose to work in the educational institutions and consider themselves different from clinical nurses. In the private sector qualified nurses are substituted by many nonqualified workers for minimum wages and are unfortunately referred to as nurses. Also, there is poor standardization and regulations across different settings (Nair & Healey, 2006). All these challenges might lay the professional commitment of this indispensible healthcare work resource at stake.

In major organisations within the healthcare system nurses, accepted as imperative members of health care systems, contribute to tremendous segment of direct patient care, despite the huge disproportion in the allocation and the global shortages of this essential workforce. As the frontline healthcare providers, nurses have the most familiar and frequent interactions with patients. The value of services that healthcare organisations hope to deliver to patients is transmitted through their nurses' attitude and behaviour (Kazemipour & Mohd Amin, 2012). Professionalism is a critical quality desired among health care professionals. It mandates integrity, compassion, honesty and the commitment to keep updated with the current advancements and technology, the ability to communicate effectively and respect the autonomy of consumers. The level of professionalism is found to be related to personal and environmental factors among individual professionals (West & Shanafelt, 2007). Nurses need a workplace environment that successfully supports the delivery of nursing care to the satisfaction of both the nurses and the patients and improving the media and public's image of nursing (Ballard, 2003). If the problems in the work environment are not addressed, nurses will not be able to sufficiently protect patients (AACN, 2002).

Health care organisations are encouraged towards the implementation of system changes that promote the professional status for nurses in an effort to attract and retain qualified nurses and achieve favourable patient care outcomes (Apker, Propp, Ford, & Hofmeister, 2006). Health care managers must focus on the concerns that will largely impact the preservation of high-quality nurses because of the critical and cost-effective contribution of nurses in provision of safe and quality care. Also the gap between attrition of experienced professional nurses and the development of fresh ones generates an opportunity to re-evaluate nursing and nurses' behaviour in the health care settings.

1.5   PURPOSE OF THE STUDY

The aim of this research is to craft added contributions to the existing literature on professionalism. The study proposes to use the concepts from the Social Cognitive Theory: An Agentic Perspective, by Albert Bandura (1999; 2001). The primary purpose of this research is to explore the influence of personal and environmental determinants on professionalism and job satisfaction among nurses. It also proposes to identify the difference in the nurses' perception about the stakeholders' image of a nurse with

respect to different stakeholders. It further focuses on the interaction effects of the determinants on professionalism, the mediation effects of job satisfaction on the relationships between the determinants and professionalism and the moderating effects of the demographic variables, such as age, gender, religion, marital status, qualification, level of the health care organisation, area of work, employment status, experience and sector of health care on the relationships between the determinants and professionalism as well as job satisfaction.

1.6   RESEARCH QUESTIONS

Healthcare practice today is changing and advancing rapidly. The satisfaction of the demand for competent, safe, cost effective and quality services (RNAO, 2007) mandate the need for professional experienced nursing services (Watkins, 2000). Further, the rapid societal advancements predispose nurses to encounter ethical and moral challenges in their every day practice. The development of competencies during academic training does not guarantee the renewal and the perfection of practice. Rather it should be personal commitment of nurses and the culture in employing organizations through a continuous knowledge acquisition network. Nurses have the responsibility towards the acquisition and update of competencies (Ghadirian, Salsali, & Cheraghi, 2014) and demonstration of professionalism in the routine practice (Khomeiran, Yekta, Kiger, & Ahmadi, 2006). They also need to accept accountability for their actions, evaluate and understand the changing work environments and meet the increasing demands in the professional practice (Alidina, 2013).

This research endeavours to answer to the following research questions:

1. Is there a difference in the nurses' perception about the stakeholders' image of a nurse?
2. What is the influence of the personal and environmental determinants on professionalism among nurses?
3. What is the influence of the personal and environmental determinants on job satisfaction among nurses?
4. What is the influence of job satisfaction on professionalism among nurses?

5. Is there an interaction effect of the determinants on professionalism among nurses?

6. Is there a mediation effect of job satisfaction on the relationship between the determinants and professionalism among nurses?

7. Is there a moderation effect of the demographic variables on the relationship between the determinants and professionalism and job satisfaction among nurses?

1.7 RESEARCH OBJECTIVES

Broad objectives are framed on the basis of the research questions in order to further expand the knowledge on the concept of professionalism and the related factors.

This study puts forth the following objectives:

1. To test the difference in the nurses' perception about the stakeholders' image of a nurse.

2. To identify the influence of the personal and environmental determinants on professionalism among nurses.

3. To identify the influence of the personal and environmental determinants on job satisfaction among nurses.

4. To identify the influence of job satisfaction on professionalism among nurses.

5. To test the interaction effect of the determinants on professionalism among nurses.

6. To evaluate the mediation effect of job satisfaction on the relationship between the determinants and professionalism among nurses.

7. To estimate the moderation effect of the demographic variables on the relationship between the determinants and professionalism and job satisfaction among nurses.

1.8   RESEARCH PLAN

The research began by exploring the existing literature on professionalism among nurses as well as among other professionals to obtain a comprehensive insight on the construct. Further extant literature related to the determinants and job satisfaction was reviewed to understand the potential research gaps and gain central knowledge which would serve as a foundation for further research.

In the second phase, with a purpose of obtaining a strong theoretical base for the work, few theories were explored and the Social Cognitive Theory (SCT) was considered as a pertinent theory to investigate the research gaps. Hypothetical relationships were drawn on the basis of this theory.

Literature on professionalism across professions and settings led to an understanding of the need to develop a context specific scale to measure the construct. The existing instruments to measure the other constructs; "nurses' perception about the stakeholders' image of a nurse", "nurse practice environment", emotional intelligence and job satisfaction, were reviewed and adapted in this study. The developed as well as the adapted scales were tested for validity and reliability. The data collected using the tools was also tested using exploratory and confirmatory factor analysis. This was the third stage of this work.

The fourth stage involved the data analysis process. Valid and usable data obtained from 749 registered nurses from different settings was analysed using SPSS version 25 and SEM in AMOS version 22 to realize the objectives of this study.

Further in the fifth stage conclusions and managerial implications were drawn based on the hypothesised relationships.

1.9   ORGANISATION OF THE THESIS

The thesis has been organized into nine chapters. A brief overview of each chapter is given below:

Chapter 1: Introduction: includes the background and significance of the study, significance of professionalism in the nursing profession, purpose of the study, research problem, research questions and the related objectives of the study, research plan and the organization of the thesis.

Chapter 2: Literature Review: presents an overview of the extant relevant literature in the area of professionalism, stakeholders/public image of a nurse, nurse practice environment, emotional intelligence and job satisfaction. It also indicates the research gap identified through the review.

Chapter 3: Theoretical Base for Conceptual Model and Development of Hypotheses: discusses the theoretical base for the research work in this study, the proposed conceptual model, definition of terms and the development of hypotheses.

Chapter 4: Research Methodology: provides the particulars of the research methodology implemented in the study. It details the research design and the approach, the population and the settings, overall sampling process, instruments, data collection process, sample characteristics, reliability of tools and the data analysis techniques.

Chapter 5: Adaptation of Scales: explains the process followed in the adaptation of the tools used to measure the constructs; Nurses' perception about stakeholders' image of a nurse, emotional intelligence, nurse practice environment and job satisfaction.

Chapter 6: Development of Scale: deals with the process of scale development to measure the construct; Professionalism.

Chapter 7: Analysis and Results: provides the details of analysis and results of data analyzed using the techniques, repeated measures ANOVA in SPSS and SEM using AMOS to test the structural models, interaction, mediation and moderation effects.

Chapter 8: Discussions: discusses the empirical findings of the study in light of the previous research.

Chapter 9: Theoretical Contributions and Implications: sketches the theoretical contributions, the managerial implications and limitations of the study. It also provides directions for future research and draws the conclusions of the study.

CHAPTER 2

REVIEW OF LITERATURE

This chapter provides a comprehensive view of the existing literature in area of professionalism and the related concepts. Literature was reviewed in order to get a broad understanding of the concept and the work of previous researchers in this area. The process was begun by exploring the previous research studies in this area in order to understand the findings and identify the gaps indicated by other researchers. Subsequent review was focussed on exploring the research studies related to the determinants influencing professionalism which was followed by understanding the role of job satisfaction as a mediator and the demographic variables as moderators. Limited research work on professionalism was identified with respect to national context till date.

The related reviewed literature is presented under the following headings:

2.1   Professionalism

2.1.a   Professionalism among various professionals in the International context

2.1.b   Professionalism among various professionals in the Indian context

2.1.c   Professionalism among nurses

2.2   Public image

2.2.a   Public image of a nurse

2.2.b   Public image of nursing

2.3.   Nurse practice environment

2.4.   Emotional intelligence among nurses

2.5.   Job satisfaction among nurses

2.6.   Mediation role of job satisfaction

2. 7.   Research gap

2.1   PROFESSIONALISM

2.1.a   Professionalism among various professionals in the International context

Colombotos (1962) identified the effects of early socialization upon "professionalism" among teachers which involved sex role, social background, religion, and integration of setting. On-the-job effects involved role differentiation, working climate of the school, professional training, participation in professional associations, and informal colleague relations. The consequences of "professionalism" on three aspects of performance-job effectiveness, proceduralism and overtime are also reported in this study.

Regoli, Crank, & Culbertson (1989) found that police chiefs' professionalism is a minimal predictor of three aspects of police function; job satisfaction, work relations, and professionalization of the police occupation and that professionalism affects several criteria of professionalization in the opposite direction.

Pollard (1995) reported that the social attributes which impact professionalism among radio announcers are younger age, being highly educated males who emphasize expertise, career concerns and the personal benefits they derive from the job. In another study (Pollard 1996) it was reported that media sector, market size and professionalism contributed to job satisfaction, while language, region, newsroom staff size, marital status and organizational features such as more job codification and rule enforcement did not.

Toh, Diong, Boo, & Chia (1996) found that academic qualifications and teaching experience of the subjects were not interrelated with teacher professionalism, while professional development was an important contributory factor to teacher professionalism. Additionally, subjects with higher professional training had a significantly higher degree of teacher professionalism. The study discussed the implications of professional development for teachers and their career paths.

Pollard & Johansen (1998) revealed that language, hierarchical authority, announcing experience, freelance income and lack of a professional education exerted the most influence on professionalism and that announcers perceived little organizational control. Professionalism among these announcers did not vary with gender.

Boyt, Lusch, & Naylor (2001) indicated that when organizations reward professional behaviour, they help promote the development of professionalism directly leading to higher esprit de corps and worker job satisfaction.

Gisondi et al., (2004) examined the responses of emergency medicine residents (EMRs) to ethical dilemmas in high-fidelity patient simulations and found that senior residents overall performance was better than the incoming interns suggesting that professional behaviors are learned through some facet of residency training. These findings suggest a need for improved resident education in areas of professionalism and ethics.

Pearson & Moomaw (2005) identified that increased general teacher autonomy improved empowerment and professionalism; greater job satisfaction increased the degree of professionalism and empowerment; and increased job satisfaction, perceived empowerment, and professionalism decreased on-the-job stress among teachers.

Brinkman et al., (2007a) found that parent and attending physician ratings of specific resident behaviors were similar on most items. However, attending physicians indicated that they were unable to observe the behaviors of interest. Nurses rated residents lower than the attending physicians on items that related to respecting staff, accepting suggestions, teamwork, being sensitive and empathetic, respecting confidentiality, demonstrating integrity and accountability. Nurse responses were higher than attending physicians on anticipating post discharge needs and effectively planning care.

Brinkman et al., (2007b) in a multisource feedback intervention study found that parent ratings about communication skills and professional behaviour among pediatric residents increased more for the multisource feedback group as compared to control group though there was no statistically significant difference between groups. Contradictorily, nurse ratings improved for the multisource feedback group and decreased for control group. The difference in change between groups was statistically significant for communicating effectively with the patient and family, timeliness of completing tasks, and demonstrating responsibility and accountability.

Wallace & Kay (2008) identified that solo practitioners and law firm partners are similar on most key dimensions of professionalism, whereas there is a great contrast between partners and associates within law firms. Partners and solo practitioners had similar experiences of autonomy and service as owner-managers. Whereas, partners and associates shared greater collegiality among professionals possibly fostered through law firm cultures. All three groups were found to experience comparable amounts of variety in their work and equal commitment to their practice. The key factors that account for gaps in professionalism reflected the nature of law practice largely through time spent with corporate clients and pressure to generate profits.

Leonard & Masatu (2010) examined the behavior of medical practitioners and found that among the one fifth of those who behaved professionally almost half were from the public sector. These professional health care workers provide high quality care even when they worked in a non rewarding environment. This finding has important implications for the use of performance-based incentives.

Al-Eraky & Chandratilake (2012) found that majority of health professionals and academicians from the reference panel of validators confirmed the appropriateness of the six domains of professionalism framework outlined in the American Board of Internal Medicine: altruism, accountability, excellence, duty, honour and integrity and respect for others, as suitable to the Arabian context. They further proposed autonomy among professionals as an additional domain.

Mahboob (2014) analysed data related to perceptions of professionalism in the context of two different cultures, Scotland and Pakistan, among clinical faculty members and medical students which resulted in nine themes; the nature of the healthcare system, models and process of professionalism, attributes of professional doctors, approach of doctors towards their patients and other healthcare professionals, working in teams, self-regulation, the role of doctors in society and within families, dealing with ethical dilemmas and legally difficult situations and resolving conflict situations in the work place. The cultural differences among the medical professionals of the two countries when they perform their daily activities were reflected in two different healthcare systems. The study suggests faculty development programme for the medical staff and due focus on communication skills, training programme and incorporation of professionalism into the curriculum.

Sejjaaka & Kaawaase (2014) indicated a weak but significant correlation between professionalism, rewards, job satisfaction and organizational commitment among Certified Public Accountants (CPA). There was no significant difference between the scores of private and public sector CPAs on professionalism, rewards and organizational commitment. There was significantly lower job satisfaction amongst CPAs employed in the public sector. Job satisfaction was found to be the greatest whereas professionalism and rewards were found to be weak predictors of organizational commitment.

Jahan, Siddiqui, Al Zadjali, & Qasim (2016) reported a significant difference in the responses of medical students and medical faculty on professional skills as well as on professional attitude and opinion regarding up to date knowledge of basic and clinical sciences and clinical competency. Students identified good communication skills and faculty staff identified up to date professional knowledge as the most important aspect of professionalism. The study highlighted the importance of encouragement of students by the faculty members towards improvement of their professional skills and attitude.

Loftus & Price (2016) found that the mid-sized police department officers with a bachelor's degree did not possess enhanced attitudinal level of professionalism over those with lower qualification.

Yadav et al., (2019) identified that the medical students did not provide reports of having seen any form of unethical behavior related to 3 major domains of professionalism and ethics i.e. discipline, plagiarism and cheating among other students and had not heard of the 'Code of Professional Conduct by the Malaysian Medical Council'. They agreed that the training in ethics and professionalism was sufficient. Female students outnumbered the male gender. This study proposed review of the teaching of ethics and professionalism, as well as introduction of an assessment strategy to strengthen the importance of professionalism and ethics.

2.1.b Professionalism among various professionals in the Indian context

Although various literature discusses on professionalism, they are largely viewpoints or conceptual clarifications, expressed by prominent authors in domains such as Army (Crowell, 1990); School system (Sharma, 2000); and Medicine (Modi,

Gupta, & Singh, 2014; Adkoli, 2016; Kalasuramath &VinodKumar 2016; Mahajan et al., 2016; Raghuveer, 2018; Adkoli, 2019). Limited studies provide empirical data evaluating professionalism among practitioners across different professions in the Indian context.

In an attempt to scrutinize contradictions and problems related to roles and status among secondary school teachers, Ginsburg, Chaturvedi, Agrawal, & Nora (1988) identified a major difference between the Indian and English teachers wherein the teachers from England considered autonomy/power as a central element of professionalism whereas Indian teachers did not.

Gupta (2007) measured professionalism among public relation (PR) practitioners and found that current practices are strong with respect to understanding of roles and responsibilities; training and development; valuing research; licensing and gender issues but low in ethics; management orientation; social responsibility; planning and rightful place within the organizational structure irrespective of their placement. However, PR agencies and Corporations differ in the perceptions related to blind advocacy, public service to community and access to the top management. Professionals with educational qualification in PR possess broader, added strategic outlook, focus on PR planning, defining objectives, measurement, research and evaluation as compared to those qualified in mass communication or management.

Kumar, Sisodia, & Jacob (2013) found reports of overall high levels of professionalism among physical therapy professionals; including post-graduate students, researchers and teaching faculty. Younger male students reported higher levels of professionalism. Teaching faculty reported high accountability; clinician-therapists reported compassion/caring, altruism and social responsibility while researchers report were high on integrity and professional duty. No sole professional group displayed overall high levels of professionalism. The study findings stress on the importance of developing educational curriculum modifications to facilitate levels of professionalism amongst physical therapists in India.

2.1.c Professionalism among nurses

The available literature in the domain of nursing professionalism describes the level of professionalism among nurses across nations. Many of the studies explored nurses' professional behaviour in government sector.

Twigg (1990) in a phenomenological approach described the perception about professionalism among Australian nurses and compared the findings with the published literature. Six themes were identified such as; expertise based on education, practical skill and persistent learning; caring and communication, holistic care, reciprocated trust and respect, professional persona, commitment, autonomy, proficiency recognition by health team and public and unity support through professional organisations.

Brooks (1992) identified low to moderate correlations between critical thinking and professionalism among the US nursing students enrolled in four types of nurse educational programs. Upper division seniors' scores were highest on professionalism and critical thinking ability.

Miller, Adams, & Beck (1993) reported results of an investigation using the behavioral inventory (BIPN) which showed that majority of respondents in USA demonstrated professional behaviors through continuing education, quality assurance participation, community service, and theory-based practice. Behaviors given low priority were research and publication, and state organizational membership. Adams, Miller, & Beck (1996) further identified consistently higher levels of professionalism among nurse executives except on autonomy and knowledge of the code for nurses. Adams & Miller (2001) noted that nurse practitioners demonstrate high levels of professionalism.

Manojlovich & Ketefian (2002) disclosed that organizational culture is a predictor of professionalism in the United States and that individual sense of accomplishment is not. The study further recommended consideration of the impact of work environment on nurses' professional practice. Also, Wynd (2003) found that professionalism was significantly related to experience, education, organizational membership, specialty and designation.

Cohen & Kol (2004) identified a modest relation between professionalism and organisation citizenship behaviours (OCB) among Israeli nurses. Dimensions of professionalism were related to perceptions of justice and further to OCB. Nurses' advanced qualification further strengthened the relation between professionalism and OCB.

Hampton & Hampton (2004) using structural equation modeling methods indicated that professionalism is related to job satisfaction and market orientation. Also found that rewards were strongly related to professionalism.

Flynn, Carryer, & Budge (2005) found that the hospital-based nurses, home care nurses, as well as the district nurses in USA and New Zealand had a high degree of agreement on the significance of organizational attributes in the practice environment that facilitate their professional practice. However, the intensity was lower among the home care nurses.

Many hospital nurses perform isolated, routine tasks, rather than use their professional training, because they are subject to control by organizational and medical divisions of labor. The environment may interfere with a nurse's ability to practice autonomously and according to the professional standards. Manojlovich (2005) in a path analysis identified the contribution of environmental factors (structural empowerment) on professional practice behaviors both directly as well as indirectly through self-efficacy in USA. Self efficacy exerted a mediator effect in the relationship between environmental factors and practice behaviors.

Nath, Schmidt, & Gunel (2006) demonstrated that the perception of professionalism varied most with the level of education and age and, to a lesser extent, with gender and health care discipline. This study warrants the need of teaching of professionalism at student phase in USA.

Turkish graduate nurses demonstrated low professionalism level (Karadag, Hisar, & Elbas, 2007). Highest level was identified in community service and code for nurses and the lowest in autonomy and education. Nurse instructors' scores were comparatively higher than the ward nurses.

Job performance, job satisfaction, organizational commitment, and turnover intention were reported as the major factors affecting the level of professionalism among nurses in Seoul by Han, Kim, & Yung (2008). Whereas, Professionalism; reflecting self-concept of the profession, social awareness, nursing service roles and professional status of nursing and originality of nursing, was reported as the common factor which influenced job satisfaction among Korean and Chinese nurses by Hwang et al., (2009). Both the group of nurses demonstrated favourable attitude towards professionalism as well as job satisfaction. Factors impacting job satisfaction of Korean nurses were job features and demographics, whereas Chinese nurses' education level and work experience in the specific departments was more influential.

Livsey (2009) revealed a direct relationship between US baccalaureate nursing student perceptions of structural empowerment in their clinical learning environment and professional practice behaviours. The students also had firm perceptions about strong leadership behaviors among clinical faculty.

Designation, employment status, work setting, experience, place and duration of education were reported as being related to professionalism in Korea by Kim-Godwin, Baek, & Wynd (2010). Also, variables predicting professionalism included membership in professional organizations and total years of nursing experience.

Zakari, Al Khamis, & Hamadi (2010) reported that Saudi Arabian nurse managers and bed side nurses demonstrated low level of professionalism. A significant correlation was found between department conflict and perception of professionalism. The researchers believe that the workplace, personal background and interest in the profession, consumers', family and public view regarding the profession could explain professionalism among nurses.

Professionalism is commonly discussed in nursing but little is known about how it is experienced in everyday nursing practice. Zibrik, MacLeod, & Zimmer (2010) reported that professionalism among Canadian and US rural nurses is a dynamic, enduring phenomenon that exists within the workplace and community contexts. To experience professionalism in rural nursing means being visible in the community while embracing reality in the workplace. Understanding professionalism

in a rural context has considerable implications for identifying sources of job satisfaction and creating professional practice environments in rural areas.

Çelik & Hisar (2012) found low levels of professionalism and moderate level of job satisfaction among Turkish nurses. They also identified a significant positive relationship between job satisfaction and professionalism. Also, most of the nurses were found to be familiar with ethical dilemmas in nursing practice in the study conducted by Cerit & Dinc (2013), although they scored low on professionalism. There was also a weak positive relation between professional behaviour and ethical decision-making. This study suggests strategies towards increasing nurses' professionalism level that can positively support their ethical decision-making ability.

Akhtar-Danesh et al., (2013) reported that "Humanists" view professional values as inclusive of personal integrity, respect for human dignity, and safety of patients and upholding of patient's privacy. "Portrayers" assumed that professionalism is apparent in one's attire, image and expression, "Facilitators" expressed involvement of personal beliefs and values as well as standards and policies, whereas; "Regulators" viewed that professionalism is fostered in a workplace where suitable standards and beliefs are communicated, accepted, and implemented. The differences in the views indicate the probability of numerous contextual variables affecting individual's perceptions of professionalism in Canada.

Fantahun et al., (2014) identified high professionalism among Ethiopian nurses and highest mean scores in ethics, advocacy and knowledge. Lowest mean scores were found for innovation, being visionary and autonomy. Nurses' scores differed in different work settings with the more experienced and diploma certified nurses having higher scores. Among group differences were seen in attitude level towards professionalism although most portrayed moderate attitude.

Konukbay et al., (2014) observed higher scores among Turkish nurses on areas of professionalism such as competence, continuing education, research, theoretical use, code and social services. Low scores were seen in publications, organizational membership and autonomy. Higher level of education was the important factor impacting nurses' professionalism.

Lombarts et al., (2014) found that European physicians and nurses display likewise high professional attitude but differ in their perceptions towards professionalism. Those who displayed more favourable professional attitude were more concerned in quality improvement actions and more inclined to report colleagues' underperformance or medical errors.

Tanaka, Yonemitsu, & Kawamoto (2014) found that nurse managers in Japan had highest scores in 'competence and continuing education' and lowest on 'publication and communication'. The results reveal that professionalism is significantly related to experience, education and designation as nurse administrator. This study recommends understanding of extrinsic professional factors impacting professionalism as one of the important implication for nursing management. High level of professionalism was also reported by Solomon, Beker, Belachew (2015) that was impacted by organizational culture, self image, Ethiopia nurses' gender, experience, marital status and qualification. In another study these researchers (Tanaka, Taketomi, Yonemitsu, & Kawamoto, 2015) recommended further comparison of nursing professionalism at international level based on the findings that nurses in U.S.A demonstrated overall high professionalism in the areas which differed among Japanese nurses.

Nursing professionalism is about the nurses striving to comprehend the expectations held of them as members of a licensed and regulated profession; and what their job feels, sounds, and looks like to themselves, as well as to those whom they encounter during practice. Stewart (2015) reported that Canadian nurses articulate their experience of professionalism with reference to their relationships with colleagues, patients, public as well as self. This study recommends identification of professionalism in relation to level of experience, variety of clinical settings and the influence of internal and external factors.

Yeun & Jeon (2015) emphasized the importance of implementing internal marketing tactics centered on preventing emotional fatigue and employment of strategies that encourage nursing professionalism in Korea based on the finding that nurses' turnover intention is associated with internal marketing and professionalism.

Baumann et al., (2016) identified that Canadian clinical nurses scored significantly higher on five of thirteen dimensions of professionalism compared to the nurses in other settings following a policy implementation.

Dikmen, Karataş, Arslan, & Bedriye (2016) indicated low professionalism among Turkish nurses that was influenced by education and work experience. The study argued the leeway of factors impacting nurses' professionalism such as undue workloads, extensive working hours, paucity of resources, educational levels, public perception, hierarchical structure, nursing tasks highlight, personnel shortage and weak unorganized labour, poor salaries and deficient job security. Similar findings are reported by Yang, Li, & Li (2016). Contrary, Hassandoost, Moghadas, Momeni, & Rafiei (2016) revealed moderate level of professionalism influenced by nurses' age and experience.

Oncology nurses satisfaction is representative of professionalism and professional quality of life in Korea. Jang, Kim, & Kim (2016) found that higher professionalism leads to higher compassion satisfaction and lower compassion fatigue. The study recommended further investigation of the relationship between professionalism and professional quality of life in a health work environment. Also, Kim & Kim (2016) identified that nurse image perceived by nursing students was positively related to professionalism, but there was no significant difference between nurse image and nursing professionalism of male and female students.

Empathy, teamwork, and lifelong learning are described as key elements of professionalism. The first recipients of their benefits are professionals themselves. San-Martín, Delgado-Bolton, & Vivanco (2017) characterized the influence of these elements on the occupational well-being of American physicians and nurses, and found important differences in the development of professionalism and in its effects on occupational well-being associated with inter-professional collaboration and work roles.

The faculty behavior strongly plays an important role in the professional development of nurses. Japanese nursing faculty perspectives were appraised regarding the behaviors related to professionalism by Tanaka, Taketom, Yonemitsu,

& Kawamoto (2017) which showed low scores. Highest scores were seen in "research development, use, and evaluation" and low in "community service".

Wuerz (2017) noted a lack of professionalism in the discipline of nursing in New York. It was found that nurses articulated practical knowledge of professional activities with little or no connection to a larger sense of professional identity, theory in practice, and ethical obligations to the future of the profession of nursing.

In United Kingdom Zafiropoulos (2017) included students from different disciplines including medical, nursing and chiropractic and reported that all the groups had good understanding of the definition and factors influencing professionalism although, nursing students performed overall better than the other two groups. Medical and chiropractic students scored lower on communication, working with colleagues and audit/research. All three groups scored low in the categories of problem dealing and health. Reflection and mentoring were two subjects that they considered as important to help them improve their cognition in becoming a professional.

A number of researchers threw light on the need to explore factors that might influence the construct professionalism in nursing; such as nurses' workplace, personal background and professional interest and public view of the profession (Zakari, Al Khamis, & Hamadi, 2010), professional practice or work environment that provides power and opportunities in the form of support, resources, and information (Manojlovich & Ketefian, 2002, Manojlovich, 2005 & Zibrik, MacLeod, & Zimmer, 2010, Jang, Kim, & Kim, 2016)), multiple internal and external factors (Kim-Godwin, Baek, & Wynd, 2010; Stewart, 2015), extrinsic professional factors (Tanaka, Yonemitsu, & Kawamoto, 2014), different levels of experience in variety of clinical settings (Stewart, 2015) and nurses' working conditions (Dikmen, Karataş, Arslan, & Bedriye, 2016).

This research considered the concepts from social cognitive theory which postulates that an individual's behaviour is the outcome of the dynamic interaction between personal, environmental and behavioural determinants. In this study nurses perception about stakeholders' image of a nurse is considered as the social environmental determinant, nurse practice environment as the physical environmental

determinant and nurses emotional intelligence as the personal determinant. Professionalism among nurses is considered as the behavioural construct and job satisfaction as the mediator. Hence extant review in these areas carried out is presented.

2.2 PUBLIC IMAGE

2.2.a Public image of a nurse

Kalisch & Kalisch (1983) in a content analysis of novels identified that nurse authors depicted nurses as facilitating patients and other individuals, as being much-admired, possessing autonomous judgment, achieving greater career satisfaction, exhibiting drive and engagement in the nursing care performance. Novel nurses were portrayed as more empathic, nurturant, intelligent, powerful, and as valuing service, whereas physicians offered the most negative images of nurses. They were the least to portray nurse characters as bearing positive behavior and personality traits, but mostly presented nurses as being occupied in sexual activities.

Porter & Porter (1991) identified that nurses have positive perceptions about their interpersonal power, intrapersonal ability and interpersonal relations and that these perceptions differed among beginners and experts, caregivers and non-caregivers, among nurses with Bachelor's degree and Master's degree and those working full time and part-time. This study highlighted the need for counseling, higher qualification and career advancement.

Aber & Hawkins (1992) examined the advertisement of nurses' role in health care in the medical and nursing journals and revealed portrayal of nurses as sex objects and as handmaidens to doctors.

Song (1993) identified that the patients and their families perceive positive image of nurses in contrast to the negative images held by the doctors and other hospital employees. Further nurses themselves have low grade and demonstrate negative value of their job, their contribution to clinical practice and professionalism when compared to doctors.

Brodie et al., (2004) investigated the experiences of students at two British Universities and revealed that many students were unaware of the high academic

standards required in the profession, but eventually have recognized the need for tremendous knowledge, skills set and responsibilities. Similarities were noticed between the societal and their own image of a nurse as overworked, underpaid professionals, lacking respect and having low morale. The findings support the need for making subtle changes in nurse education and emphasizing nurses' skills with a motive to influence public opinion.

Fealy (2004) through a critical historical analysis on the public image of nurses in Ireland disclosed the origins of the good nurse. The analysis also identified the societal, cultural and prevailing political system influence on the image of a nurse.

Lam (2005) explored perceptions of students, housewives and others in Hong Kong which revealed that nurses are viewed as professionals who lay their heart and soul into their career and endeavour to provide the best patient care. They established that education is the basis for the growth of a profession and that a unified academic level will help to contour the image of nursing and promote the professional image and status of nursing for professional practice.

Siebens et al., (2006) identified positive self-image among nurses. They reported pride and considered themselves as capable and responsible professionals. They stressed on the need for effective teamwork, managerial support, societal recognition, and satisfactory time for completion of their duties.

Kalisch, Begeny, & Neumann (2007) following content analysis reported the image of nurses on Internet as intelligent, committed, trustworthy, respected, educated, competent, accountable professionals possessing specialized knowledge and skills. It was found that the scientific/research-oriented, doctoral-prepared, competent, powerful, and creative/innovative, sexually promiscuous image had increased since 2001–2004, while committed; authoritative, attractive/well groomed image had decreased. The results suggest that important opportunities such as Internet can be used to bring about an improvement in the image of the nurse.

However, Halter (2008) indicated that psychiatric nurses are least described as dynamic, logical, skilled and respected and psychiatric nursing as the least preferred specialty.

Seo (2009) reported that nurses' image significantly differed among four domains; such as 'role of a nurse', 'qualification of a nurse', 'interpersonal relationship of a nurse' and 'social participation of a nurse', among respondents from five departments. Department of nursing reported more positive image followed by physical therapy, radiology, emergency medical technology and least positive by clinical pathology. Nurses' image was an outcome of direct interaction with nurses', seeing nurses' performance and/or watching nurse on television.

Jeong & Yoo (2010) revealed that the image among nursing students was positive. The highest mean scores were found on the item nurses' expert knowledge and the lowest on ample opportunities for promotion.

De Vliegher et al., (2011) identified positive self-image among home nurses. The findings also highlighted the delicate balance between the great degree of autonomy and the need for support in the professional roles and responsibilities of home nurses.

Popović & Pahor (2011) indicated that the Slovenian newspapers presented reasonably positive image of nurses describing them as competent, highly qualified health professionals engaged in modern nursing practice, preventive health care and health education. However, majority of the newspaper articles focused on the low salaries, poor working conditions and nursing shortage.

Tonder & Van Wyk (2011) described the perception of visitors at acute care units regarding the image of a nurse and nursing as positive which contradicts the negative images portrayed by the media in South Africa. Oosthuizen (2012) in a qualitative content analysis of South African newspapers also reported images of nurses as caring, compassionate and knowledgeable professionals. However, these images were overshadowed by negative reporting. Articles that portrayed nurses as overworked, uncaring, lazy, ruthless, and incompetent and suffering from burnout appeared regularly. In another study, Meiring & Van Wyk (2013) described public perceptions about the positive image of nurses as extremely hardworking, caring and understanding and that they consider their work as an independent profession and not as secondary to doctors. These findings were contradictory to the negative portrayal of the image by the media in South Africa. However, nursing was not considered as a career choice and there was a continual perception about nursing as a female

profession. This study calls for the government to strive towards improving public healthcare, up the nursing profession and take a critical look at the image of the profession portrayed in the media.

Wlodarczyk & Tobolska (2011) assessed professional, interpersonal and personal attributes of nurses and found low appraisals by doctors as well as patients as compared to nurses except for tidiness and mental strength. Also, nurses viewed their professional position in the medical profession and society as the lowest.

Embegho (2012) found that hospital nurses have more negative perceptions, except for those in the maternity and child health areas. There are negative perceptions about each other among the senior nurses and the new entrants. The findings suggest that nurses must work together in bringing up a change in the system and perpetuate the negative stereotyped image of nurses.

Mostafa (2013) found that self image of nurses was higher than the public image. However, more nurses perceived that they do not display expertise or competency in all their tasks. More students perceived that they could deal with more responsibilities. Many nurses expressed feeling of not contributing sufficiently to the nursing profession. Significant positive correlations were found between nurses and students' scores of public and self image and their self reported self-esteem and task performance.

Hoeve, Jansen, & Roodbol (2014) discussed about the diversity and the incongruence in the public image of nurses which is self-created due to nurses' imperceptibilty and need for public discourse. The study suggests nurses to communicate their professionalism to the public through the use of strategic positions.

Belete, Lamaro, & Henok (2015) revealed that most of the non-nursing and non-physicians category demonstrate favorable attitude and believe that nurses make significant contribution to healthy patient outcomes though a few perceive nurses as incompetent. However, they demonstrated contradictory attitude towards nursing profession. Majority of physicians show unfavorable attitude followed by nurses themselves.

Gavranić, Iveta, & Sindik (2015) identified that the public was very satisfied with the nurses' quality of services. Nurses were perceived as kind, helpful and empathetic. Nursing is also considered as a respected profession in the society.

Glerean, Hupli, Talman, & Haavisto (2017) discussed that young people described nurses are considered as less intellectual, but caring and kind people who work tirelessly. The nature of nursing work was related with unfavourable working conditions, shift duties and limited level of autonomy. Nursing work was primarily viewed as helping and caring for patients, and as inferior to doctors' work. They also describe the status of nursing as being low in society.

Several researchers have disclosed significant relation between image of a nurse and job satisfaction and job performance. The stereotypical, traditional public as well as the image of a nurse among nurses themselves has been also identified as having significant relationship with nurses' intention to quit from tertiary care settings (Lim & Yuen, 1998); self-esteem, self concept, job satisfaction and job performance (Takase, 2000; Takase, Kershaw, & Burt, 2002; Abdelrahman, 2018), job satisfaction and retention plans among nurses (Cowin, 2002), job performance and turnover intentions (Takase, Maude, & Manias, 2006), intention to migrate (Hendel & Kagan, 2011) and professionalization of these professionals (Toren, Kerzman, & Kagan, 2011). These studies provide evidence to the need in identifying strategies that will encourage nurses to improve their public image, which is crucial in enhancing professionalization and professional attitudes and behaviours among nurses.

2.2.b Public image of nursing

Several researchers investigated the perceptions related to the nursing profession among students and have presented a range of findings. Favourable perceptions among the student community were reported across countries in which nursing was considered as a helping and caring profession, though they were unaware about the expanded roles and advancement opportunities in USA (Grossman et al., 1989) as having personal growth, illness focus, job security, and professionalism (Kersten, Bakewell, & Meyer, 1991; Lovan, 2009; Milisen et al., 2010; Embegho, 2012); in California (Seago, Spetz, Alvarado, & Keane, 2006); Dar Es Salaam (Achilles, 2010); Bahrain (Eman, Cowman, Edgar, 2012); Jordan (Al Jarrah, 2013) and Egypt (El Rahman & Shousha, 2013). In India too, nursing was perceived as a

respectful and dignified profession (Patidhar, Kaur, Sharma, & Sharma, 2011). In contrast negative images and lack of desire to join the profession was also identified amongst the teenagers of Hong Kong (Foong, Rossiter, & Chan, 1999), viewed nursing as physically challenging, having low respect and recognition in USA (Goodin, 2003; Buerhaus, Donelan, Norman, & Dittus, 2005); UAE (El-Haddad, 2006; Varaei, Vaismoradi, Jasper, & Faghihzadeh, 2012; & Valizadeh et al., 2014) and Iran (Price & Mcgillis, 2014). In a discussion paper in Greece, Bakalis, Mastrogianni, Melista, & Kiekkas (2015) reported negative perceptions related to the social role of nursing, characteristics essential for entry to work, reputation, economic and societal status, and self image.

Researchers have reported a number of reasons for the choice of nursing as a career. In USA, employment opportunities, nurturance, financial benefits, emotional needs and interest in science (Kersten, Bakewell, & Meyer, 1991). Monetary rewards and status were reported among the Hong Kong community (Foong, Rossiter, & Chan, 1999); and good income potential, job security, and interesting work in US (Seago, Spetz, Alvarado, & Keane, 2006). Opportunity to serve humanity and due societal recognition was revealed in Indian society (Patidhar, Kaur, Sharma, & Sharma, 2011), work availability, career opportunity, and financial reasons in Jordan (Al Jarrah, 2013) and Eygpt (El Rahman & Shousha, 2013). In Finland the reasons for career choice in nursing was personal satisfaction and job security (Mkala, 2013) which was also identified among Greek students (Bakalis, Mastrogianni, Melista, & Kiekkas, 2015). These findings may be considered as important implications in recruiting young people into the profession.

Interestingly a few researchers have revealed the influence of practicing nurses (Kersten, Bakewell, & Meyer, 1991; Varaei, Vaismoradi, Jasper, & Faghihzadeh, 2012). Parents, friends, and other family members (Buerhaus, Donelan, Norman, & Dittus, 2005 & Al Jarrah, 2013), information from internet (Eman, Cowman, Edgar, 2012) and peers (Tan-Kuick, 2012) as influencing students' image and the choice of nursing.

Further, a few have also highlighted the contradictory images of the profession among the general public and nurses themselves. Kunene, Nzimande, & Ntuli (2001) revealed that the consumers rating of nursing image was positive and that the few who

presented negative ratings justified through reasons directed at authorities as well as the nurses. Fletcher (2007) explored related literature and found that, nurses did not have a very positive self-image nor did they think highly of the profession which was consistent with public image. Donelan et al., (2008) reported that nursing is highly respected profession and majority general public would recommend a career in this profession.

Dos Santos Jesus et al., (2010) learnt that there had been prejudicial attitudes while making career choice in nursing, through the course in nursing education and within the professional practice in Brazil. Ertem, Donmez, & Oksel (2010) analyzed published news items to understand portrayal of nursing in Turkey and found that published articles lacked reflections of the scientific face of nursing and rather presented negative impression of the profession. Milisen et al., (2010) identified negative societal view of nursing in Belgium.

Price & McGillis (2014) based on literature discussed the prevalence of historical images of nursing and nurses in society that continue to impact the career choice of nursing among the future generation of nurses. It was further reflected that those interested were probably dissuaded from choosing nursing as a career due to the negative, stereotypical images, particularly those that mark the profession as being inferior to medicine.

Bakalis, Mastrogianni, Melista, & Kiekkas (2015) revealed that most of the nurses consider that nursing offers career prospects, social recognition and job security although they agree that it is a tiring profession lacking autonomous practice. Most of them did not join continuing education programs and would not recommend career in nursing.

Liaw et al., (2017) identified that participants from healthcare groups including nursing and higher educational institutions perceived nursing as being subjected to greater gender stigma and that they would less likely achieve higher qualification, career advancement and enjoy fulfilling careers as nurses and gain their parental support or make their parents proud.

2.3   NURSE PRACTICE ENVIRONMENT

Nurse practice environment as the background for care delivery has been gaining mounting attention in the current years and has an inseparable connect with patient care outcomes (Choi, Pang, Cheung, & Wong, 2011).

Demir, Ulusoy, & Ulusoy (2003) found that oncology nurses experience high collegial nurse-doctor relationships and significant lower level of emotional exhaustion resulting in superior outcomes in comparison with non-oncology nurses. Whereas Panunto & Guirardello (2013) revealed that nurses experiencing limited autonomy and control over their practice, and having poor interpersonal relationships, endure a greater degree of emotional exhaustion, which can have a negative influence on their perception of care quality, job satisfaction and intention to quit their jobs. Dos Santos Alves, da Silva, & de Brito Guirardello (2017) confirmed the earlier findings and added that a favourable NPE positively influences the safety climate for nurse professionals.

Hall & Kiesners (2005) understood the multiple factors that compose nurses' work environment and the related issues such as the varying needs of hospitalized patients and the associated workload, extensive shortage of nurse professionals and the imbalance created in nurses' work. Another crucial finding was the level to which nurses were impacted by the care adequacy they were capable to provide that created a huge burden of guilt and over commitment among the nurses which further led to frustration and stress; and impacted nurses' personal as well as professional life.

Manojlovich (2005) reported that both environment and nurse-physician communication influences job satisfaction among nurses. Apker, Propp, Ford, & Hofmeister (2006) in a qualitative analysis revealed four communicative skills exemplified by nurse professionals: compassion, collaboration, credibility, and coordination. Further Manojlovich & DeCicco (2007) revealed that nurse-physician communication influenced medication errors. These findings suggest that use of specific communication techniques in the nurse–team relationship should be part of nurses' graduate curriculum and in-service education in health care organizations.

Chiang & Pepper (2006) reported fear, face-saving concern, power hierarchy, and practice environment factors such as peer relations and quality management as the

major perceived barriers for reporting medication administration errors (MAE). There was no association with age, work experience, qualification, experience of previous MAEs and the failure to report. Duffield et al., (2011b) reported that nurse staffing (fewer RNs), increased workload and unstable ward environments were linked to negative patient outcomes including falls and medication errors on medical/surgical wards. Van Bogaert et al., (2017) confirmed that unit level nurse managers and workload directly influenced the patient outcome and quality of care. Mousa (2017) identified that more experienced registered nurses are associated with less falls and medication error incidence.

Lake & Friese (2006) identified that NPE varied greatly among hospitals but not based on community size or hospital bed size. Kelly, McHugh, & Aiken (2012) confirmed that magnet hospitals had significantly more favorable work environments and highly educated nurses wherein the nurses report less dissatisfaction in their jobs and lower levels of burnout. Kwon & Kim (2012) stated that unit-level NPE is one among the factors impacting nurses' turnover intention in small and medium sized hospitals. In another study, Lindqvist et al., (2015) contradicted that nurses in small hospitals were more satisfied with the practice environment compared to those working in medium-sized and large hospitals. These studies recommend creation of good support services and nurses' participation in hospital affairs.

Milisen et al., (2006) highlighted that the nurses' commitment in being competent quality care providers was remarkably strong, however, they faced multiple and complex barriers in the practice environment such as the quality of management and leadership, insufficient staff and stressful time demands. Khani, Jaafarpour, & Dyrekvandmogadam (2008) also, studied that nurses were exposed to heavy workload, inadequate salaries, inadequate skill mix, time paucity influencing their completion work, lack of autonomy in patient care decision making, inaccurate societal image of nurses, paucity of career advancement facilities and dissatisfaction. These nurses reported of feeling unenergetic and incapable of balancing work and family lives. The findings present information for nursing managers and policy makers on issues among nurse professionals needing urgent attention and indicate specific strategies towards improving organizational productivity.

gAdverse workplace factors increase the risk of ill-health among hospital workers which indicate a need for comprehensive measures in the psychosocial work environment. Aust et al., (2007) stated that health care workers are presented with more quantitative, cognitive and emotional demands, higher work pace and more role conflicts than laboratory technicians. They also reported higher work organization, including greater influence at work, higher developmental possibilities and higher work meaning. Further results showed an association between higher level of demands at work, problematic interpersonal relations and lower levels of work organization and lower self-rated mental health.

Understanding ways to guide and support nurse practice in a daily effort in providing complex and accurate care, along with the demands of healthy and stable nursing workforce is challenging. Several other researchers have reported significant association between favourable practice environments and improved nurse reported positive care quality as well as positive work force outcomes in terms of intention to stay (Gardner, Thomas-Hawkins, Fogg, & Latham, 2007; Choi, Pang, Cheung, & Wong, 2011; Ritter, 2011; Van Bogaert et al., 2014) and job satisfaction (Wang et al., 2015; AbuAlRub, El-Jardali, Jamal, & Abu, 2016) with no difference among private and public sector (Coetzee, Klopper, Ellis, & Aiken, 2013). Job satisfaction was higher among nurses in public hospitals as compared to those working in teaching hospitals (Al-Hamdan, Manojlovich, & Tanima, 2017). These findings have significant implications for healthcare managers and policymakers indicating an urgent need in creating satisfactory work environments that will support nursing practice.

Boltz et al., (2008) confirmed that controlling for hospital and nurse characteristics, three positive dimensions of geriatric NPE (institutional values, resource availability and capacity for collaboration) were associated with favorable geriatric care delivery.

Organizational barriers such as lack of time and nursing autonomy were the most significant perceived barriers whereas availability and simplicity of resources, culture building, and learning opportunities were the facilitators significantly correlated with practice as reported by Brown, Wickline, Ecoff, & Glaser (2009). Others, Roche, Duffield, & White (2011) revealed that experienced nurses who feel supported with strong leadership, participation in hospital affairs and foundations of nursing care

quality consider themselves as competent, exhibited greater willingness to engage in patient care activities in mental health settings. McHugh & Lake (2010) and McHugh & Ma (2014) discovered that work environment and nurse staffing considerably influenced nurse outcomes. Presence of supportive management, adequacy of resources, teamwork and assurance of quality have been reported as important characteristics in the RN practice environment that are positively related to nurse reported quality of care as well as experiences of positive feelings in their jobs. Also, adverse events are considered as nurse-sensitive patient outcome because of the relation to staffing levels (Hinno, 2012).

Choi, Pang, Cheung, & Wong (2011) reported that staffing, management, professional and job incentives and co-worker relationships were among the most essential elements of nurse practice environment that contribute as stabilizing factors and the influence on nurse retention.

Improvement of hospital work environment could be a reasonably low cost strategy in improving safety and quality of hospital care, patient satisfaction, including the reduction in mortality rates (Kirwan, Matthews, & Scott, 2013; Ma, Olds, & Dunton, 2015; Olds, Aiken, Cimiottic, & Lake, 2017). Several researchers confirmed nurses' shortage as the primary factor affecting nursing care (Lang et al., 2004; Leiter & Laschinger, 2006; Friese et al., 2008; Gunnarsdottir, Clarke, Rafferty, & Nutbeam, 2009; Twigg, Duffield, Thompson, & Rapley, 2010; Aiken et al., 2011; Aiken et al., 2012; Coetzee, Klopper, Ellis, & Aiken, 2013; Aiken et al., 2014; Stalpers et. al. 2015; Darega et. al. 2016). Other reported factors are nurse managers support (Gunnarsdottir et.al.2009, Duffield et. al. 2011); nurses' skill mix, qualification, experience, workload (Duffield et. al. 2011); especially in public hospitals (Aiken 2013); collaborative nurse-physician relationships (Gunnarsdottir et. al. 2009; Stalpers, Brouwer, Kaljouw, & Schuurmans, 2015) and overcrowding of the practicing students, heavy workload, shortage of resources and poor working condition (Darega et al., 2016). These studies indicate that improving nurse practice environment including patient-nurse ratios promises retention of qualified and committed nurses that may benefit quality patient care.

Van Bogaert et al., (2013) identified nurse–physician relations, unit level nursing management and workload as predictors of quality of care in psychiatric hospitals.

Anzai, Douglas, and Bonner (2014) reported overall favourable ratings of nurses on their work environment. Their ratings were high on quality of nursing management and physician relations, but low for staffing and resources. Ward nurse managers' ratings of the practice environment were more positive than the staff nurses with the exception for staffing and resources. Also, practice environment was found to be a significant predictor of the patient care quality and ward morale. Years of work experience was strongly associated with perceived ability in providing quality nursing care. Further, Kang, Kim, & Lee (2014) reported that access to education and doctor-nurse relationship improve care quality and decrease adverse patient outcomes such as patient falls, nosocomial infections, medication errors and pressure sores.

Other researchers have identified that acute and intensive care unit nurses (Ganz & Toren, 2014) as well as the new graduate nurses (Numminen et al., 2016) display a statistically significant, negative correlation between nurses' intention to leave and their practice environment. Also, a moderate correlation was found between job satisfaction and their practice environment. This study disclosed positive levels of overall nurse practice environment, as well as on the dimension collegial nurse–physician relations. The dimension 'appropriate staffing and resources' had the lowest scores and was the sole feature that differed on the basis of geographic region and hospital size. Giandinoto & Edward (2014) in a systematic search identified a number of challenges faced by healthcare staff working in acute care settings with patients with a co-morbid mental illness such as environmental factors, negative attitudes, experience of fear, low mental health literacy and being optimistic and positive in providing care as professionals.

Nurse work environment was explored through evaluation of the self-reported missed nursing care and the related reasons by Winsett et al., (2016). The findings indicated that the most frequently missed care was medication administration within a 30 minute window, ambulation of patients as ordered and mouth care. Significant reasons for the care missed were: unexpected rise in volume of patients, inadequate assistance, plenty admissions and discharges, inadequate staff, medications not available on time and emergency situations.

2.4   EMOTIONAL INTELLIGENCE AMONG NURSES

In a profession where nurses have to face life-and-death decisions, all information, including data obtained from emotions is considered critical. Nurses need to appreciate and interpret how patients feel, ascertain their concerns and motives, and demonstrate empathy in the care. It is also crucial to understand and deal with own emotions for self-protection and health while providing high quality care to their patients (Deklava & Millere, 2011). The skills which help nurses deal with the emotional demands in the healthcare environment that may be exhausting and stressful are termed as Emotional Intelligence (EI) (Landa, López-Zafra, del Carmen Aguilar-Luzón, & de Ugarte, 2009).

Emotional Intelligence (EI) is observed as a significant predictor of and is positively related to job satisfaction among supervisor-follower dyad at a university (Wong & Law, 2002), chief financial government officers designated as senior managers (Carmeli, 2003), food service employees (Sy, Tram, & O'Hara, 2006), nurses (Guleryuz, Guney, Aydın, & Asan, 2008; Trivellas, Gerogiannis, & Svarna, 2013; Tagoe & Quarshie, 2017), primary and secondary education teachers (Kafetsios & Zampetakis, 2008), police officers (Afolabi, Awosola, & Omole, 2010), physicians (Weng et al., 2011), employees at international electronic firm (Ealias & George, 2012), indirectly influence job satisfaction among hotel employees through the mediation role of emotional disonance and personal accomplishment (Lee & Ok, 2012), industrial employees (Shooshtarian, Ameli, & Amini Lari, 2013), bank employees wherein males demonstrated greater job satisfaction (Hamid, 2016), teaching faculty in management institutes (Chaturvedi, Mishra, & Yadav, 2017), employees of software industries (Gawade, 2017) and high school teachers (Latif, Majoka, & Khan, 2017).

However, Chiva & Alegre (2008) reported very low and non significant relationship between emotional intelligence and job satisfaction among Spanish ceramic tile manufacturers. Similar findings were noted among hotel employees, students and tourism professionals by Buble (2018) in the hospitality sector.

Wong & Law (2002) showed that emotional intelligence of followers at a university influences their job performance. Similar findings were revealed among research and development scientists employed in a large computer company (Law, Wong, Huang,

& Li, 2008), nursing students (Beauvais, Brady, O'Shea, & Griffin, 2011), industrial employees (Shooshtarian, Ameli, & Amini Lari, 2013) and call centre agents (Shamsuddin & Rahman, 2014). Contradictorily emotional intelligence was identified as a weak predictor of job performance among high school female teachers (Latif, Majoka, & Khan, 2017).

Emotional intelligence is indentified as correlated with extra-role behavior of leaders (Wong & Law, 2002) and the development of successful human relationships in nursing practice (McQueen, 2004). Emotional intelligence is found to be significant in augmenting altruistic behavior, positive work attitudes and work outcomes among senior managers working as chief financial officers (Carmeli, 2003), nurses' organisational commitment (Guleryuz, Guney, Aydın, & Asan, 2008), ethical behaviour of peer nurses (Deshpande & Joseph, 2009), self image or self concept among nursing students (Landa, López-Zafra, del Carmen Aguilar-Luzón, & de Ugarte, 2009) and problem-focused and emotion focused coping styles of graduate students (Noorbakhsh, Besharat, & Zarei, 2010). Relationship is found between well being and perceived nursing competency among nursing students (Por, Barriball, Fitzpatrick, & Roberts, 2011) and academic success among graduate nursing students (Beauvais, Brady, O'Shea, & Griffin, 2011), perception of politics in the banking sector (Asad & Durrani, 2014) and caring behavior of nurses (Kaur, Sambasivan, & Kumar, 2015).

However there are reports of non significant relationship between emotional intelligence and academic success among the entire mixed group of undergraduate and graduate, particularly among the undergraduate nursing students (Beauvais, Brady, O'Shea, & Griffin, 2011) and EI and commitment among industrial employees (Shooshtarian, Ameli, & Amini Lari, 2013).

Moderating influence of emotional intelligence is also found on the relationship between work-family conflict and career commitment but not job satisfaction of senior managers working as chief financial officers (Carmeli, 2003). Mustafa, Santos, & Chern (2016) also reported a moderating influence of this trait on the relationship between HR professionals' emotional labour and burnout.

Van Dusseldorp, Van Meijel, and Derksen (2011) reported gender differences in the level of emotional intelligence with female nurses' level being significantly higher than that of male nurses working in psychiatric care. However, no difference was identified on the basis of age and experience. Ealias & George (2012) reported significant difference in emotional intelligence based on experience and marital status among employees in an international electronic firm. Li (2012) investigated the level of emotional intelligence among supervisory, executive, management, as well as non management level employees and identified that this trait is positively related to their age, education and experience and the level of employment, except gender. Tagoe & Quarshie (2017) supported the no gender difference finding in the trait.

2.5   JOB SATISFACTION AMONG NURSES

Job satisfaction may be considered as an overall, universal feeling on the job or as an associated constellation of attitudes related to the various features or aspects of the job (Lu, Barriball, Zhang, & While, 2012). It amplifies commitment and efficiency among employees in the organization (Abbaschian, Avazeh, & Rabi SiahkaliS, 2011). Job satisfaction is fundamental in providing quality patient care (Mrayyan, 2006). However, the swift changes in healthcare industry in recent years have posed increasing demands on nurses. Job satisfaction has become a significant issue due to the impending nurse shortages and the retention issues that affect patient care and the related costs. Hence there is an increasing need for organisations to consider measures towards sustaining and improving nurses' job satisfaction (Al Maqbali, 2015).

Researchers across settings have explored this construct among nurses' and have revealed an array of findings. In USA, Blegen et al., (1992) obtained nurses ratings and understood the type of recognition that is more meaningful for nurses' job satisfaction. Most meaningful were private verbal feedback, written acknowledgment and monetary rewards, besides schedule adjustment, public acknowledgment and opportunities for development. Bratt, Broome, Kelber, & Lostocco (2000) revealed significant association between nurse-physician collaboration, nursing leadership behaviors, professional job satisfaction and organizational work satisfaction among nurses working in the pediatric intensive care unit.

Fung-Kam (1998) provided reports of dissatisfaction among Hong Kong nurses especially in areas of autonomy, pay and professional status, more than task requirements, interaction and organizational policies, although there was no relationship between job autonomy and satisfaction level of nurses. Lu, Barriball, Zhang, & While (2012) identified negative relationship between job satisfaction and nurses' intention to leave the hospitals. The variance in job satisfaction was explained by occupational stress, organizational commitment, professional commitment, role ambiguity, role conflict, educational level, age and experience. Li & Lambert (2008) predicted workload, uncertainty about patients' treatment, years of experience, behavioural disengagement and coping strategy as influencing job satisfaction among Chinese nurses. Further, Tao, Ellenbecker, Wang, & Li (2015) highlighted the influence of workload demands, ICU environment, lack of respect and work recognition on nurses' job dissatisfaction.

In Saudi Arabia, El Gilany & Wehady (2001) identified high level of satisfaction among majority nurses with their work place and roles assigned. Al-Ahmadi (2002) found moderate level of overall job satisfaction. The most significant determinants identified were; technical aspects of supervision, recognition, utilization of skills, work conditions, pay and facility for job advancement. The level of job satisfaction was related to educational level and years of experience but not with age, gender, income, marital status or nationality. Abu-Helalah, Jorissen, Niaz, & Al Qarni (2014) revealed an overall prevalence of high job satisfaction.

Autonomy, professional status and interaction were considered as the most important components of registered nurses' job satisfaction in a teaching hospital in Australia (Finn, 2001). There was dissatisfaction with respect to organisational policies and task requirements. Cowin (2002) revealed that autonomy, pay and professional status were determinants of satisfaction although job satisfaction remained relatively stable for experienced nurses, but was dissatisfying during the transition from student to registered nurse.

Newman, Maylor, & Chansarkar (2002) in a qualitative study in London identified that patients, intrinsic professional characteristics and the team are the factors that control job satisfaction. They also stated poor management and staff shortages as the two main sources of dissatisfaction. Coomber & Bariball (2007) in a systematic

literature review of nine articles revealed that leadership and stress issues continue to influence turnover and satisfaction among nurses. An association was reported between the level of education acquired and pay structure with their satisfaction levels. This review suggested the need for future research on nurses' job satisfaction at ward level.

Rosenstein (2002) in an analysis revealed that routine interaction between nurses and physicians influences nurses' morale. There was a direct relationship between physicians' disruptive behavior and nurses' satisfaction and retention. Hoffman & Scott (2003) identified autonomy, pay and professional status as the most important determinants of career satisfaction for every nurse participant. Aron (2015) revealed a positive relation between job satisfaction among nurses and the delivery of quality of care. The factors that influenced nurses' job satisfaction the most were pay, compensation, work environment and quality of care.

Some other researchers from other countries studied nurses' satisfaction and found contrasting findings. Others revealed significant relationship between job satisfaction and other factors. Laschinger, Finegan, Shamian, & Wilk (2004) identified that in Ontario, changes in the perceived structural empowerment directly influenced changes in the psychological empowerment as well as job satisfaction. Al Otabi, Shah, Chowdhury, & Al-Enezi (2004) in Kuwait reported that age, nationality and department of work had positive significant correlation with job satisfaction, whereas, higher educational qualification and job experience in different countries had an inverse relationship. Manojlovich & Laschinger (2008) further found that structural and psychological empowerment predicted job satisfaction.

Mrayyan (2006) disclosed that Jordanian nurses were 'neither satisfied nor dissatisfied' in their jobs, but those working in wards were found to be more satisfied than those in the critical care units. Saif & Saleh (2013) reported that Jordanian private hospital nurses perceived themselves as greatly empowered and experienced high level of job satisfaction. Alsaraireh, Quinn Griffin, Ziehm, & Fitzpatrick (2014) revealed statistically significant negative relationship between psychiatric nurses' job satisfaction and their turnover intention. The results also showed that job satisfaction was correlated with age, experience, salary, qualification and type of unit but not shift type.

Pal & Saksvik (2006) indicated a difference in the predictors of job satisfaction between Norwegian and Indian nurses. Greater job control and subjective work place wellbeing predicted job satisfaction among Indian nurses, but had no influence for Norwegian nurses. In India, Jahan & Kiran (2013) indicated better job satisfaction among nurses in the government sector as compared to those in private sector who face job insecurity and long working hours. Mohite, Shinde, & Gulavani (2014) also reported that majority tertiary care hospital nurses were highly satisfied with respect to their jobs except in relation to independence and compensation. Rao, Ramani, Raveena, & Nikitha (2017) too revealed job satisfaction among Indian nurses.

Iranian nurses were identified as moderately satisfied and committed to the organization by Mosadeghrad, Ferlie, & Rosenberg (2008). Abbaschian, Avazeh, & Rabi SiahkaliS (2011) also reported moderate level of job satisfaction; wherein nurses expressed greater satisfaction related to the social status of the profession and lowest with respect to work and welfare, and rights and benefits. Namayandeh, Juhari, & Yaacob (2011) and Fallahnejad, Hassanzadeh, & Azimilolaty (2016) revealed that majority nurses experienced moderate to high level of job satisfaction. Basabr, Khankeh, Dalvandi, & Ghaedamini (2018) also reported similar findings among pre-hospital emergency and emergency nurses and further identified age, gender, marital status, service record, educational level, and income and working hours as significant determinants of job satisfaction.

Poh (2008) concluded that professional status and autonomy are among the top two factors influencing nurses' job satisfaction in the private sector hospitals in Malaysia. Significant differences in job satisfaction were identified based on position, age, experience, current unit of work and assignment to the type unit /work. Further, Alam & Mohammad (2010) reported moderate satisfaction among nurses with respect to supervisor, co-workers, compensation, job variety, closure and HRM/management policies. A negative relation was found between job satisfaction and the intention to leave their job and the hospital.

Han, Moon, & Yun (2009) found permanent Korean nurses reports of greater levels of job satisfaction as compared to the temporary nurses. Sim & Kim (2010) identified no difference in the job satisfaction between nurses and nurse assistants. Choi, Kim, & Kim (2014) revealed high level of job satisfaction among senior, married, more

educated, those working as charge nurses and having longer clinical careers. Chung & Ahn (2019) disclosed a strong relationship between organizational culture and Korean nurses' job satisfaction.

However, Mitchell (2009) in a triangulated analysis identified that foreign trained nurses employed in Saudi Arabia experience of job satisfaction differs with their qualification; from positive to negative, with respect to nurse manager leadership, ability and support of nurses, organizational support and control over practice setting, staffing and resource adequacy and nurse–physician relationships. Nurses also reported neutral feelings of professional work environment. Important issues included staffing, security, policies and procedures, status, communication, support and continuing education for nurses.

Iliopoulou & While (2010) revealed a positive moderate association between Greek critical care nurses' autonomy and job satisfaction, but not job satisfaction and role-conflict or role ambiguity. Lazar (2010) revealed a positive relationship between Jewish nurses' spiritual values and aspects of spirituality with job satisfaction. Nabirye, Brown, Pryor, & Maples (2011) demonstrated a significant difference in job satisfaction and performance among public and private sector hospitals in Uganda. Nurses in the government hospitals reported lower level of job satisfaction as well as job performance. Significant negative relationships were identified between work stress and job satisfaction as well as between work stress and job performance. There were further influences of experience, hospital type, ward and number of children on job satisfaction and performance. Job satisfaction was a significant predictor of self-reported quality of job performance and mediated the relationship between work stress and job performance.

Almalki, FitzGerald, & Clark (2012) reported dissatisfaction among Saudi Arabian nurses. The factors causing dissatisfaction were lack of facilities, unsuitable working hours, imbalance between work and family needs, inadequate vacation time, staffing, supervision and management, lack professional development and working environment, poor security, scarce patient care equipment and materials. Leisure facilities, poor salary and social view of nursing were other essential factors. Many nurses disclosed of being satisfied with co-workers, experienced a feeling of belonging to their workplaces and were satisfied to be nurses. They also found

significant differences based on age, gender, marital status, dependent family members, nationality, organisational tenure, nursing tenure, monthly salary. No differences were noted with relation to educational level and location of PHC.

KhaMlub et al., (2013) found that Laos's nurses were satisfied with freedom to choose the working method, variety, responsibility and co-workers relationship but dissatisfied with salary structure. There were significant differences based on age, experience and position. Rosales, Labrague, & Rosales (2013) in Philippines stated that respondents were unsatisfied with their job which was related to their level of burnout.

Alotaibi, Paliadelis, & Valenzuela (2016) in a qualitative analysis revealed that lack of support and educational opportunities, perceptions of favouritism, poor image of nursing profession, intensive workloads, stressful work environment and religion influences job satisfaction among Saudi Arabian nurses. Yurumezoglu & Kocaman (2016) revealed that in Turkey, dissatisfaction was among the factors that predicted nurses' intention to leave the organisation as well as the profession.

Haile, Gualu, Zeleke, & Dessalegn (2017) identified that Ethopian nurses were moderately satisfaction with their jobs and experienced higher level of satisfaction with respect to the nature of work and most dissatisfaction related to promotion. There was a difference in the level of job satisfaction among nurses based on their age, gender and having children. Kabeel & Eisa (2017) identified high level of job satisfaction which was significantly correlated with professional identities in Egypt. In Thailand, Nguyen, Duong, & Vu (2017) found that professional nurses experience moderate level of satisfaction which was related to work conditions and psychological empowerment but not to the education level, working unit and work experience.

Rahimparvar et al., (2017) reported moderate job satisfaction among midwives in Tehran and significant relationship between job satisfaction and current job promotion system and modeling other colleagues. Also negative relationship was disclosed between job satisfaction and the midwives role ambiguity. Semachew, Belachew, Tesfaye, & Adinew (2017) reported low job satisfaction among majority Ethiopian nurses. Workload, working unit, professional commitment mutual understanding at work place predicted job satisfaction. Zheng et al., (2017) identified that majority

Psychiatric nurses in Singapore were satisfied with the highest score on work experience and age.

2.6 MEDIATION ROLE OF JOB SATISFACTION

Mediating effect is the effect of a third variable on the relationship between two different constructs. Direct effect is the relationship between the independent and the dependent variable and the indirect effect is the relationship which is indicated through a sequence of relationships that involves an intervening variable. Some researchers have identified the mediation effects of job satisfaction on the relationship between job stressors and organisational commitment in UAE (Yousef, 2002), the personality trait; agreeableness and counterproductive work behaviours among the customer service employees at fast food stores in USA (Mount, Ilies, & Johnson, 2006), emotional intelligence and organizational commitment among nurses in Turkey (Guleryuz, Guney, Aydın, & Asan, 2008), occupational stress and job performance of nurses in Uganda (Nabirye, Brown, Pryor, & Maples, 2011), internal marketing and organizational commitment among school teachers in Taiwan (Ting, 2011), organizational justice and organizational commitment of South Korean police officers (Crow, Lee, & Joo, 2012), leadership style and organizational commitment among different levels of employees in various organizations in Croatia, Europe (Sušanj & Jakopec, 2012), emotional intelligence and organizational commitment in Kerman University employees (Taboli, 2013), spouse career support and turnover among army officers in USA (Huffman, Casper, & Payne, 2014), work stress and turnover intention (Kuo, Lin, & Li, 2014), emotional intelligence and perceived general health among faculty from Medical Sciences in China (Yuan, Tan, Huang, & Zou, 2014), emotional competence and perceived service quality among accounting professionals in Kayseri, Turkey (Aykan & Aksoylu, 2015), psychological empowerment and innovative behavior among hotel employees in Turkey (Cingöz & Kaplan, 2015), vertical trust and distributed leadership among health professionals, administrative staff and supporting service staff, in Denmark (Jain, 2016), emotional intelligence on job performance administrative employees at Jordan University (Vratskik, Al-Lozi, & Maqableh, 2016), emotional intelligence and job commitment among bank employees in Pakistan (Batool, Parveen, & Batool, 2017), transformational leadership and organizational commitment among employees within

the SMEs of Karachi, Pakistan (Khan, Rao, Usman, & Afzal, 2017), work motivation, leadership style, competence and employees' performance among office employees in Singapore (Mansyur et al., 2017), emotional intelligence and job performance among employees in Chennai, India (Vanishree & Ponreka, 2017), and organizational justice and employee outcomes among the local government staff in Nigeria (Mashi, 2018).

2.7   RESEARCH GAP

Nursing researchers have identified varied levels of professionalism among nurses in different settings using different tools; in USA (Adams, Miller, & Beck, 1996; Manojlovich & Ketefian, 2002; Tanaka, Taketomi, Yonemitsu, & Kawamoto, 2015), Israel (Cohen & Kol, 2004), Turkey (Karadag, Hisar, & Elbas, 2007; Çelik & Hisar, 2012; Konukbay et al., 2014; Dikmen, Karataş, Arslan, & Bedriye, 2016), Korea and China (Hwang et al., 2009), Saudia Arabia (Zakari, Al Khamis, & Hamadi, 2010), North Ethopia (Fantahun et al., 2014), USA and Japan (Tanaka, Yonemitsu, & Kawamoto, 2014), South West Ethiopia (Solomon, Beker, & Belachew, 2015), Iran (Hassandoost, Moghadas, Momeni, & Rafiei, 2016) and Rizhao, China (Yang Li, & Li, 2016).

Literature indicates the influence of some or individual factors such as organisational culture (Manojlovich & Ketefian 2002; Solomon, Beker, & Belachew, 2015), structural empowerment (Manojlovich, 2005), job satisfaction (Han, Kim, & Yung, 2008), self image (Solomon, Beker, & Belachew, 2015) and demographic variables on professionalism among nurses.

A number of researchers have communicated the need to explore factors that might influence the construct professionalism in nursing; such as professional practice or work environment that provides power and opportunities in the form of support, resources and information (Manojlovich & Ketefian, 2002; Manojlovich, 2005; Zibrik, MacLeod, & Zimmer, 2010; Jang, Kim, & Kim, 2016), multiple internal and external factors (Kim-Godwin, Baek, & Wynd, 2010; Stewart, 2015), nurses' workplace, personal background, professional interest, society's image of the profession (Zakari, Al Khamis, & Hamadi, 2010), extrinsic professional factors (Tanaka, Yonemitsu, & Kawamoto, 2014), different levels of experience in variety of clinical settings (Stewart, 2015) and nurses' working conditions (Dikmen, Karataş,

Arslan, & Bedriye, 2016). These gaps serve as openings to seek further knowledge on nurses' perceptions about the factors influencing their professionalism in the perspective of the contemporary society.

Saari & Judge (2004) suggested the need for research with a focus on the greater understanding of individual characteristics, such as emotion while defining job satisfaction and the influence of this employee attitude on organizational performance. Literature has identified limited work in this area. Job satisfaction is found to mediate several relationships, however, literature on the mediation effects on the relationship between the determinants considered in this study and professionalism has not been identified.

Several demographic factors have been identified as influencing professional behaviour, but the moderating influence has been explored to the minimum extent. This study intends to fill the gap and examine the moderating effect of a number of demographic variables such as; age, gender, marital status, religion, qualification, level of employment, area of work, employment status, experience and sector of health care organisation.

CHAPTER 3

THEORETICAL BASE FOR CONCEPTUAL MODEL AND DEVELOPMENT OF HYPOTHESES

The conceptual framework guiding this research work is based on "Social Cognitive Theory: An Agentic Perspective by Albert Bandura (1999; 2001)". This theory is considered apt in this work as the researcher attempts to explore the influence of the determinants (personal determinant: emotional intelligence and the social environmental determinant: nurses' perception about stakeholders' image of a nurse and physical environmental determinant: nurse practice environment) on behaviour (professionalism) among nurses. It is also planned to identify the interaction effect of the determinants on professionalism and the mediation of job satisfaction. This study further aims to explore the moderation effects of demographic variables on the relationship between the determinants and job satisfaction and on the relationship between the determinants and professionalism behaviour among nurses.

3.1 SOCIAL COGNITIVE THEORY (SCT): AN AGENTIC PERSPECTIVE. (ALBERT BANDURA 1999; 2001)

The capability to exercise control over nature and the quality of life is the quintessence of humanness. Human agency is featured by a number of core characteristics that operate through functional and phenomenal consciousness. This includes the temporal expansion of agency via intentionality and forethought, self regulation through self-reactive influence, and self-reflectiveness regarding the capabilities, quality of functioning and the purpose and meaning of one's life quests. Personal agency works within a broad coordination of socio-structural influences. In the agentic transactions, human beings are producers and products of social systems. An agent, by own actions, has to make things happen intentionally. The central features of agency facilitate people to play a role in their adaptation, self-development, and self-renewal with changing times.

Human behavior is shaped and automatically and mechanically controlled by environmental stimuli. Environmental input activates an all-inclusive dynamic throughput (the interaction between the determinants) that generates the output (behavior). The personal agency involves the phenomenal consciousness and purposive use of information and self-regulatory means to bring about desired outcomes. Human functioning is considered as richly contextualized, socially interdependent, and conditionally orchestrated in the dynamics of a variety of societal subsystems and a complex interplay of various factors. Human beings are agents of experiences and not just under-goers of experiences. They are not simply the audience hosts of internal mechanisms managed by environmental events. The nature of human experiences is heavily dependent on the variety of selected physical and social environments. And, the socio-structural influences function through psychological mechanisms in order to produce behavioral outcomes.

Cognitive factors predict human behavior rationally and guide effective interventions. Human beings are required to make their way productively through a complex world filled with challenges and hazards. They have to make fine judgments about their potentials, anticipate the possible effects of diverse events and courses of action, sum up the socio-structural opportunities and limitations, and accordingly regulate their behavior. Self-regulation is a key factor in occupational life. In the contemporary work place, one needs to take responsibility of self-development for a range of positions and careers through the entire course of work-life and cultivate multiple competencies for keeping pace with the ever-evolving occupational demands and roles. Human mind is not just reactive, but rather creative, generative, proactive, and reflective. Faced with a set of task demands, they behave mindfully to make required things happen. Human beings try to evaluate what is desired of them; frame hypotheses and reflectively examine their competence by evaluating outcomes of their actions. They set personal goals or motivate themselves for performing in pleasant or impressive manner to bring about self-satisfaction.

Social cognitive theory also discusses human functioning in stipulations of triadic reciprocal causation in which internal personal factors in the profile of cognitive, affective, and biological events, the behavioral patterns, and the environmental influences together operate as interacting determinants influencing one

another bi-directionally (fig 3.1). Social cognitive theory discriminates the types of environmental structures that represent degrees of changeability necessitating the exercise of varying focus and scope of personal agency. This theory also explains that the socio-structural factors function through the psychological mechanisms of self system towards producing behavioral effects. For example, educational, socioeconomic conditions, and family structures impact behavior largely through their influence on people's sense of efficacy, aspirations, affective states, personal standards, and other self-regulatory influences.
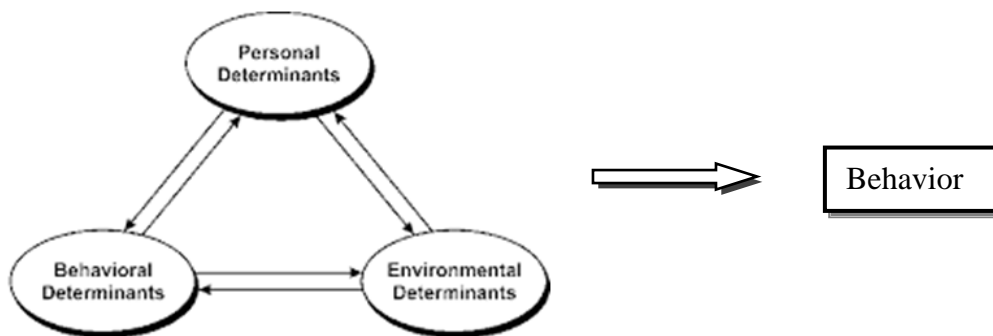
Fig. 3.1 The triadic reciprocal causation of behaviour - Social Cognitive Theory
(Bandura, 1999; 2001)
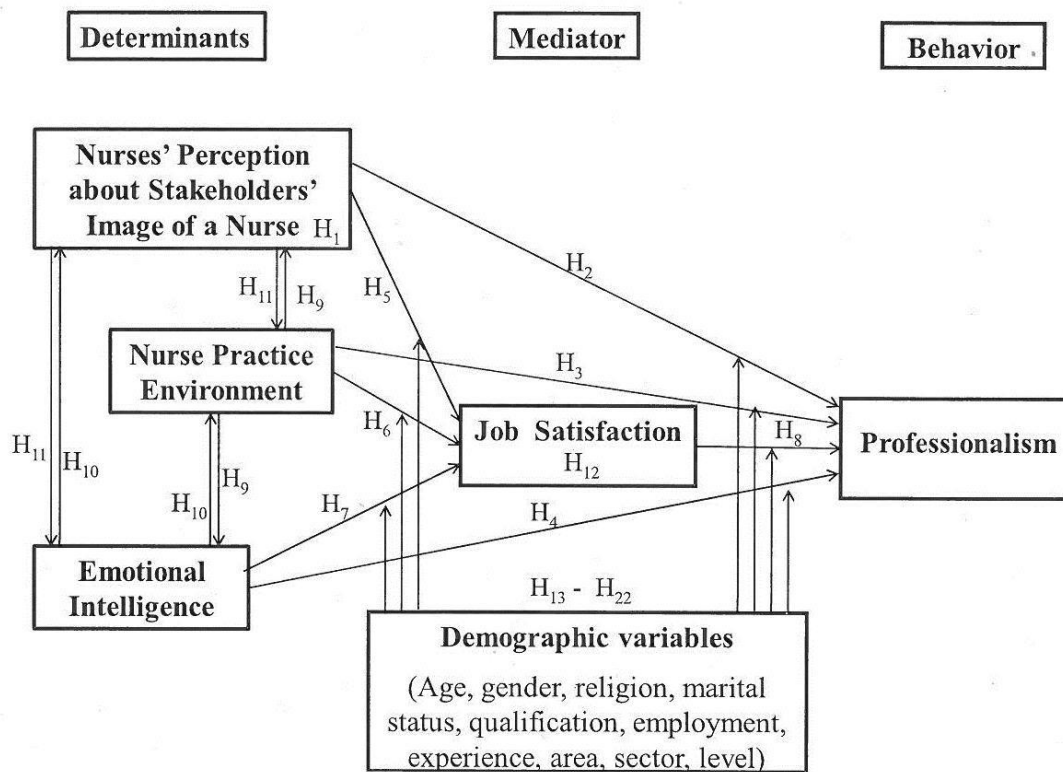
Fig 3.2 Proposed Conceptual Model in the Study

The proposed conceptual model based on the concepts of social cognitive theory depicting the determinants (personal determinant: Emotional Intelligence, environmental determinants: Nurses' Perception about Stakeholders' Image of a Nurse as the social environmental determinant and Nurse Practice Environment as the physical environmental determinant) and behaviour (Professionalism) is presented in Fig. 3.2. along with the mediator (Job Satisfaction) and the moderators (Demographic variables).

3.2   DEFINITION OF CONSTRUCTS IN THE PROPOSED CONCEPTUAL MODEL

Understanding of certain concepts may vary among respondents which mandate establishing of clarity in the meaning of these terms. Operational meaning or description of the concepts used in a research problem in measurable terminology is called operational definition or working definitions. Operational definitions clarify

concepts with respect to the specific study and might mean different in different context (Kumar, 2011).

Image is defined as 'a mental picture representing a real object or a more or less accurate likeness of a thing or person'. Perceived job image refers to the ideology or shared beliefs about the meaning of occupational membership with respect to the social status, capability, and behavior patterns of individual members (Lim & Yuen 1998). Image of Nursing is viewed as "the sum of beliefs, ideas, and impressions that people have of nurses and nursing profession" (Kunene, Nzimande, & Ntuli, 2001). Nurse's professional self-image is the aggregate of diverse individually held thoughts, principles, perceptions, expectations and experiences (Milisen et al., 2010). It is how people, their peers, the general public and, in nursing; it is how patients, their families and supervisors perceive another person, group or phenomenon (Varaei, Vaismoradi, Jasper, & Faghihzadeh, 2012).

Perceived Public Image of nurses is the nurses' perception and beliefs of how they are viewed by society in their role, career, intelligence and attitudes (Takase, 2000). It is the way in which nurses perceive themselves within their working environment (Seibens et al., 2006).

In this study, Nurses' Perception about Stakeholders' Image of a Nurse (NPSIN) refers to the nurses' perception and beliefs of how they are viewed by the stakeholders; namely doctors, patients, other hospital staff, and also by themselves within their working environment with respect to the nurse's interpersonal power, interpersonal relations and intrapersonal ability.

Lake (2002) defined **Nurse Practice Environment** as "the organizational characteristics of a work setting that facilitate or constrain professional nursing practice". Professional practice environment can be described as the system that supports nurses' control over the delivery of nursing care, the environment in which care is delivered and the characteristics of an organization that facilitate or constrain professional nursing practice (Lake, 2002; Hinno, 2012). It is defined as the organisational characteristics of the work environment that help or hinder professional nursing practice (Ganz & Toren 2014).

In this study, Nurse Practice Environment (NPE) is defined as the organizational characteristics of the work setting that facilitate or constrain professional nursing practice.

Emotional Intelligence has been defined as "the ability to adaptively perceive, understand, regulate and harness emotions in the self and others" (Salovey & Mayer, 1990). Bar-On (1997) defined emotional intelligence as "an array of non-cognitive capabilities, competencies and skills that influence one's ability to succeed in coping with environmental demands and pressure" (Van Dusseldrop, Van Meijel, & Derksen, 2011; Deklava, & Millere, 2011). Goleman (2001) defined it as the ability to distinguish feelings, to motivate ourselves and to manage emotions in ourselves and in our relationships. Salovey and Mayer (1990) described it is a sub group of social intelligence that includes the capability to examine feelings and emotions, to distinguish between them and to utilize the data to direct one's reasoning and action. Mayer and Salovey (1990); Mayer, Perkins, Caruso, & Salovey (2001) divided emotional intelligence into four areas of skills: (1) perceiving emotions, (2) using emotions to facilitate thoughts, (3) understanding emotions and (4) managing emotions in a way that enhances personal growth and social relations. Schutte et al., (2002) defined it as the ability to perceive and express emotion, assimilate emotion in thought, understand and reason with emotion and regulate emotion in the self and others.

In this study, Emotional Intelligence (EI) refers to the ability to perceive, understand, regulate and manage self and others' emotions while coping with environmental pressure and demands.

Twigg (1990) defined **Professionalism** as "qualities or typical features of a profession or professionals." Hammer (2000) defined it as "the active demonstration of the traits of a professional" and further states that "Professionalism is displayed in the way pharmacists conduct themselves in professional situations. This definition implies a demeanor that is created through a combination of behaviors, including courtesy and politeness when dealing with patients, peers, and other health care professionals. Evans (2008) describes it as the attitudes and behavior one possesses toward one's profession. Zibrik, MacLeod, & Zimmer (2010) referred professionalism to the "conduct, goals or qualities" that are indicative of a profession or that designate

someone as a professional. It refers to the conduct, qualities, and/or goals that characterize a profession and usually describes behaviours that are expected of the profession's members (Tanaka, Yonemitsu, & Kawamoto, 2014).

In this study, Professionalism refers to the demonstration of behaviours by a nurse in accordance with the Code of Professional Conduct for Nurses by the Indian Nursing Council.

Job Satisfaction is defined as 'the extent to which people like or dislike their jobs' (Spector 1997; as cited by Chiva & Alegre, 2008). It is 'an employee's affective reaction to a job, based on a comparison between actual outcomes and desired outcomes (Mosadeghrad, Ferlie, & Rosenberg, 2008). Locke (1976) defined employee satisfaction (often referred to as job satisfaction) as "the pleasurable or positive emotional state resulting from the appraisal of one's job experiences" (Liu, Aungsuroch, & Yunibhand, 2016).

In this study, Job Satisfaction (J_Sat) refers to "the overall pleasurable or positive emotional state resulting from the appraisal of one's job experiences".

A nurse is a person who has completed a program of basic, general nursing education and is authorized by the appropriate regulatory authority to practice nursing in his/her country (ICN 2017).

In this study nurse is defined as a person who has undergone training in a professional nursing programme of minimum three years in a recognized institution and is registered under the Goa State Nursing Council.

The **demographic variables** include age, gender, marital status, religion, qualification, and area of work, level of organisation, employment status, experience and sector of health care.

3.3 THEORETICAL BASE FOR PROPOSED HYPOTHESES

Research hypotheses are predictive statements about the relationship between variables (Leech, Barrett, & Morgan, 2005). Hypotheses bring direction, specificity, clarity and focus to the research problem. It is a speculative statement which is

verified through a research work. The formulated hypotheses should be simple, conceptually clear and specific, verifiable based on existing body of knowledge (Kumar, 2011).

3.3.1 Nurses Perception about Stakeholders' Image of a Nurse

Porter & Porter (1991) found that nurses had a positive self-image. Yang (1998) found a positive response among patients, their family members as well as among parents of elementary, middle, high schools students in Seoul. Siebens et al., (2006) and Włodarczyk & Tobolska (2011) revealed that doctors and patients' appraisal of nurses as more negative than that of nurses themselves. Takase, Maude, & Manias (2006) noted that nurses rated their image as more positive than the perceived public image. Meiring & Van Wyk (2013) and Tonder & Van Wyk (2011) identified that the public viewed nurses as very hardworking, caring and understanding but media portrayed negative images in South Africa. Contrary, the newspaper in Slovenia presented positive image of nurses (Popović, & Pahor 2011). Milisen et al., (2010) identified that societal view of nursing was more negative as compared to the views held by the nursing students. Varaei, Vaismoradi, Jasper, & Faghihzadeh (2012) documented that despite developments, nurses are not recognized for the skills by the public. Hoeve, Jansen, & Roodbol (2014) disclosed that the actual public image is diverse and incongruous. The findings indicate a need to explore the influence of nurses' perception about different stakeholders' image of a nurse.

H1   There is significant difference in the nurses' perception about the stakeholders' image of a nurse.

In this study, data related to the nurses' perception about stakeholders' image of a nurse is collected from nurses with respect to four different stakeholders; "Nurses' perception about doctors' image of a nurse (NP-DIN), Nurses' perception about patients' image of a nurse (NP-PIN), Nurses' perception about other hospital staffs' image of a nurse (NP-OHSIN), Nurses' perceived image of a nurse (NP-IN)". The subsequent hypotheses are tested four times wherein the construct "Nurses' perception about stakeholders' image of a nurse" differs with respect to each stakeholder in every model.

The hypotheses indicated:

- With "a" refers to the model including "Nurses' Perception about Doctors' Image of a Nurse (NP-DIN)" along with other variables.

- With "b" refers to the model including "Nurses' Perception about Patients' Image of a Nurse (NP-PIN)" along with other variables.

- With a "c" refers to the model including "Nurses' Perception about Other Hospital Staffs' Image of a Nurse (NP-OHSIN)" along with other variables, and

- With a "d" refers to the model including "Nurses' Perceived Image of a Nurse (NP-IN)" along with other variables.

3.3.2 Nurses' Perception about Stakeholders' Image of a Nurse and Professionalism among Nurses

Horrocks, Anderson, & Salisbury (2002) identified that patients expressed greater satisfaction with the quality of care provided by nurse practitioners as compared to doctors. Takase, Maude, & Manias (2006) revealed that the nurses' perception of a negative public image in comparison to their self image resulted in improved performance. Popović & Pahor (2011) found that most newspaper articles highlighted nurses' poor working conditions, inadequate salaries and shortage of nurses, but described nurses as competent, well educated health professionals involved in modern nursing practice, preventive health care and health education. Contrary, Emeghebo (2012) revealed that the poor image dissuades the entry of prospective nurses into the profession and limit the aspirations and opportunities of registered nurses. (Fantahun et al., 2014) in a focus group discussion found that society's views influenced professionalism among nurses in Public Hospitals of North Ethiopia. Solomon, Beker, Belachew (2015) using a three item instrument identified the influence of nurses self image on professionalism. Nurses' image by stakeholders as well as nurses' perceptions about stakeholders' image of a nurse has been identified as influencing nurses from the entry into the profession to their exit. Hence understanding the influence of this perception is considered crucial in this study.

H2   Nurses' perception about the stakeholders' image of a nurse positively influences professionalism among nurses.

H2a   Nurses' perception about doctors' image of a nurse (NP-DIN) positively influences professionalism among nurses

H2b   Nurses' perception about patients' image of a nurse image (NP-PIN) positively influences professionalism among nurses.

H2c   Nurses' perception about other hospital staffs' image of a nurse (NP-OHSIN) positively influences professionalism among nurses

H2d   Nurses' perceived image of a nurse (NP-IN) positively influences professionalism among nurses.

3.3.3   Nurse Practice Environment and Professionalism among Nurses

Manojlovich & Ketefian (2002) found that organisational culture is a significant predictor of nursing professionalism. Friese (2005) identified that oncology nurses reported improved high-quality care due to favorable collegial nurse-physician relations. Further, nurse practice environment is linked to patient outcomes including falls and medication errors (Manojlovich & DeCicco, 2007; Purdy, 2011); death and failure to rescue (Lang et al., 2004; Friese et al., 2008). Deshpande & Joseph (2009) found that independent working climate significantly impacts ethical behavior of nurses working in the oncology units. Aiken et al., (2012) discussed that favourable work environment and reduced ratio of patient-nurse is associated with improved nurse reported care quality and nurse workforce outcomes. Darega et al., (2016) found that the quality of nursing care practice is undermined due to nursing work overload, shortage of resources and environmental interruptions, overcrowding due to the presence of many practicing students, technical competences of nurses and nurses-patient communication problems. Health care providers face many challenges in the health care environment in maintaining patient safety which is an essential and vital component of quality care (Ballard, 2003). The American Association of Critical-Care Nurses recognizes the inextricable links among quality of the work environment, excellent nursing practice and patient care outcomes (AACCN, 2005).

H3a-H3d   Nurse practice environment positively influences professionalism among nurses.

3.3.4   Emotional Intelligence and Professionalism

Carmeli (2003) identified that emotional intelligence boosts altruistic behaviour, favours positive work attitudes and outcomes, and moderates relation between career commitment and work-family conflict among hospital nurses but not

job satisfaction. Emotional intelligence is a chief predictor of organizational performance and job satisfaction (Kafetsios & Zampetakis, 2008 & Guleryuz, Guney, Aydın, & Asan, 2008). It plays a central role in impulse regulation and formation of successful interpersonal relations (McQueen, 2004; Deklava & Millere, 2011). Deshpande & Joseph (2009) revealed that emotional intelligence of peers impacts ethical behaviour of nurses. Smith, Profetto-McGrath, & Cummings (2009) found that emotional intelligence of leaders influence employee retention, patient care quality and patient outcomes. It is positively related to self concept (Landa, López-Zafra, del Carmen Aguilar-Luzón, & de Ugarte, 2009), nursing performance (Beauvais, Brady, O'Shea, & Griffin, 2010), well-being, problem focussed coping and perceived nursing competency and negatively to stress (Por, Barriball, Fitzpatrick, & Roberts, 2011), impacts the nurses' caring behavior and the respectful deference towards others (Kaur, Sambasivan, & Kumar, 2015). However, emotional intelligence demonstrated as a poor predictor of job performance among teachers (Latif, Majoka & Khan, 2017). In a profession where nurses have to face life-and-death decisions, all information, including data obtained from emotions is considered critical. The skills which help nurses deal with the emotional demands in the healthcare environment may be exhausting and stressful. (Landa, López-Zafra, del Carmen Aguilar-Luzón, & de Ugarte, 2009). The nurse's capacity to establish a rapport with patients, handle their own emotions as well as empathize with patients, at the same time create and maintain a compassionate environment is crucial to providing quality care.

| H4a-H4d | Emotional intelligence positively influences professionalism among nurses. |

3.3.5 Nurses' Perception about Stakeholders' Image of a Nurse and Job Satisfaction

Lim & Yuen (1998) found that the perceived job image is significantly associated with nurses' job satisfaction. Newman, Maylor, & Chansarkar (2002) & Goodin (2003) determined that poor image of nursing contributes to the nursing shortage in the USA. Takase, Kershaw, & Burt (2002) found that nurses' perception of the negative public image is related to job satisfaction. Poh (2008) identified professional status and autonomy as top two factors impacting job satisfaction of

nurses in the private hospitals in Malaysia. Abbaschian, Avazeh, & SiahkaliS, (2011) identified that job satisfaction was strongly related to the social prestige of the nursing profession in society. Toren, Kerzman, & Kagan (2011) reported a positive association between professional self-image and image of the clinical area and professionalization but identified no differences regarding job satisfaction. Almaliki, FitzGerald, & Clark (2012) identified that the nurses are dissatisfied with societal nursing view. Jahromi et al., (2014) found that nursing image in the society has a great influence on the attitude of nursing students, which further influences the development of their professional self concept. Tao, Ellenbecker, Wang, & Li (2015) found lack of respect and recognition for the nurses' work was as a contributing factor to nurse satisfaction and morale. Previous research indicates that there are contradictory findings related to the relationship between image of nurses and job satisfaction. This study aims to identify the influence of the nurses' perception of public image of a nurse by different stakeholders on the job satisfaction among nurses.

H5	Nurses' perception about the stakeholders' image of a nurse positively influences job satisfaction among nurses.
H5a	Nurses' perception about doctors' image of a nurse (NP-DIN) positively influences job satisfaction among nurses
H5b	Nurses' perception about patients' image of a nurse image (NP-PIN) positively influences job satisfaction among nurses.
H5c	Nurses' perception about other hospital staffs' image of a nurse (NP-OHSIN) positively influences job satisfaction among nurses
H5d	Nurses' perceived image of a nurse (NP-IN) positively influences job satisfaction among nurses.

3.3.6 Nurse Practice Environment and Job Satisfaction

Nurse practice environment impacts nurses' job satisfaction (Demir, Ulusoy, & Ulusoy, 2003; Applebaum et, al. 2010, Duffield et al., 2009; Kelly, Fealy, & Watson, 2011; Almaliki, FitzGerald, & Clark 2012; Aron, 2015 & AbuAlRub, El-Jardali, Jamal, & Abu, 2015). Mrayyan (2006) reported that nurses were neither dissatisfied nor satisfied in their jobs but satisfaction among nurses working in wards

was higher than nurses who work in critical care units. Li & Lambert (2008) suggest that nurses are dissatisfied with inapt working hours, lack of facilities, low work family balance and vacations, poor staffing, management and supervision, inappropriate professional development and working environment, low security, patient care materials and equipment and leisure facilities. Supervisor's behavior was identified as having the strongest association with intrinsic satisfaction by Decker, Harris-Kojetin, & Bercovitz (2009). Abbaschian, Avazeh, & SiahkaliS (2011) found facilities and working conditions as among the important factors affecting job satisfaction. Tao, Ellenbecker, Wang, & Li (2015) also revealed that the excessive workload demands and the uncertainty in the ICU work environment were the major influences on job dissatisfaction among nurses. Surprisingly, Al-Hamdan, Manojlovich, & Tanima (2017) found that nurses in public hospitals reported greater satisfaction than those working in teaching hospitals. Nurses working in psychiatric settings in Singapore were found to be satisfied with their job (Zheng et al., 2017), whereas, Semachew, Belachew, Tesfaye, & Adinew (2017) found excessive workloads in the inpatient units as dissatisfying.

H6a-H6d   Nurse practice environment positively influences job satisfaction among nurses

3.3.7   Emotional Intelligence and Job Satisfaction

Carmeli (2003) identified that emotional intelligence boosts altruistic behaviour, favours positive work attitudes and outcomes, and moderates relation between career commitment and work-family conflict among hospital nurses but not job satisfaction. Chiva & Alegre (2007) revealed extremely low, insignificant relationship between Spanish ceramic tile manufacturers' emotional intelligence and job satisfaction. However, Guleryuz, Guney, Aydın, & Asan (2008) and Ealias & George (2012) disclosed positive relation between EI and job satisfaction. Kafetsios & Zampetakis (2008) found emotional intelligence as an important personality level predictor of job satisfaction. Whereas Lee & Ok (2012) did not find any direct relationship between emotional intelligence and employees' job satisfaction in the international electronic firm. Latif, Majoka & Khan (2017) found that teachers with higher emotional intelligence demonstrated greater job satisfaction as compared to those with low emotional intelligence. Saari & Judge (2004) indicated the need to

conduct future research with a focus on greater understanding of personal characteristics, such as emotion, in defining job satisfaction and how employee attitudes influence organizational performance.

H7a-H7d   Emotional intelligence positively influences job satisfaction among nurses.

3.3.8 Job Satisfaction and Professionalism

Nurses' work satisfaction is important, as it improves communication and the ability to address a patient's questions and concerns (Haas et al., 2000).Its absence often leads to lethargy and reduced organizational commitment (Tella, Ayeni, & Popoola, 2007). Chen (2008) revealed that jobs with the characteristics of professionalism, feedback, and autonomy easily increase the job satisfaction among IS personnel. Hwang et al. (2009) identified that professionalism impacts job satisfaction and performance among nurses. Job satisfaction influences individual, organizational and greater health and social outcomes (Pillay, 2009) including the provision of quality of patient care (Rosales, Labrague, & Rosales, 2013). However, Aron (2015) found that work environment and care quality affect nurses' job satisfaction. The contradictory findings of job satisfaction influencing organisational behaviours and vice versa indicate the need to further explore the relation between the two constructs; job satisfaction and professionalism among nurses.

H8   Job satisfaction positively influences professionalism among nurses

3.3.9 Interaction Effects of the Determinants on Professionalism among Nurses

Social cognitive theory discusses that human functioning is considered as richly contextualized, socially interdependent, and conditionally orchestrated in the dynamics of a variety of societal subsystems and a complex interplay of various factors. It postulates stipulations of the triadic reciprocal causation of human functioning in which internal personal factors in the profile of cognitive, affective, and biological events, the behavioral patterns, and the environmental influences together as the interacting determinants as well as influencing one another bi-directionally. It further explains that the socio-structural factors function through the psychological mechanisms of self system towards producing behavioral effects. Hence this research hypotheses the following relationships:

H9a1-H9d1	There is a significant interaction effect of nurse practice environment and emotional intelligence (NPExEI) on professionalism among nurses.
H9a2-H9d2	There is a significant interaction effect of nurse practice environment and nurses' perception about stakeholders' image of a nurse (NPExNP-SIN) on professionalism among nurses.
H10a1-H10d1	There is a significant interaction effect of emotional intelligence and nurse practice environment (EIxNPE) on professionalism among nurses.
H10a2- H10d2	There is a significant interaction effect of emotional intelligence and nurses' perception about stakeholders' image of a nurse (EIxNP-SIN) on professionalism among nurses.
H11a1- H11d1	There is a significant interaction effect of nurses' perception about stakeholders' image of a nurse and nurse practice environment (NP-SINxNPE) on professionalism among nurses.
H11a2-H11d2	There is a significant interaction effect of nurses' perception about stakeholders' image of a nurse and emotional intelligence (NP-SINxEI) on professionalism among nurses.

3.3.10 Meditation Effect of Job Satisfaction

Job satisfaction mediates the relationship between personality traits; agreeableness and work behaviours (Mount, Ilies, & Johnson, 2006), emotional intelligence and organisational commitment (Guleryuz, Guney, Aydın, & Asan, 2008), organizational empowerment and organizational commitment (Chang, Shih, & Lin, 2010), occupational stress and job performance (Nabriye, Brown, Pryor, & Maples, 2010). However, Latif, Majoka & Khan (2017) identified that job satisfaction does not mediate the relationship between teachers' emotional intelligence and their job performance. This study also aims to identify the mediation effects of job satisfaction on the relation between the determinants and professionalism among nurses.

H12	There is a mediation effect of job satisfaction on the relationship between the determinants and professionalism among nurses
H12a1-H12d1	There is a mediation effect of job satisfaction on the relationship between nurses' perception about the stakeholders' image of a nurse and professionalism among nurses.
H12a2- H12d2	There is a mediation effect of job satisfaction on the relationship between the nurse practice environment and professionalism among nurses
H12a3- H12d3	There is a mediation effect of job satisfaction on the relationship between emotional intelligence and professionalism among nurses.

3.3.11 Moderation Role of Demographic Variables

Significant difference is identified between professionalism and education and nurses experience (Dikmen, Karataş, Arslan, & Bedriye, 2016; Hassandoost, Moghadas, Momeni, & Rafiei, 2015; Yang, Li, & Li, 2016; Konukbay et al., (2014), age (Hassandoost, Moghadas, Momeni, & Rafiei, 2015), gender, marital status, self image and organizational culture, (Solomon, Beker, Belachew, 2015), position (Tanaka, Yonemitsu, & Kawamoto, 2014), work settings (Fantahun et al., 2014). Relation of these factors with job satisfaction and performance is reported by several researchers; such as sector of hospital, area/ward (Nabriye, Brown, Pryor, & Maples, 2011; Jahan & Kiran, 2013; Mrayyan, 2006), location of PHC (Almaliki, FitzGerald, & Clark, 2012). Van Dusseldorp, Van Meijel, & Derksen (2011) reported that nurses in psychiatric care have above average emotional intelligence. This study aims to explore the moderation effects of the demographic variables such as; age, gender, marital status, religion, qualification, area of work, level of health care, employment status, experience and sector of health care organisation, on the relationship between the determinants and job satisfaction and professionalism among nurses. The different paths or relationship are shown in fig. 3.3.

Fig. 3.3. Proposed Path by Path Moderation
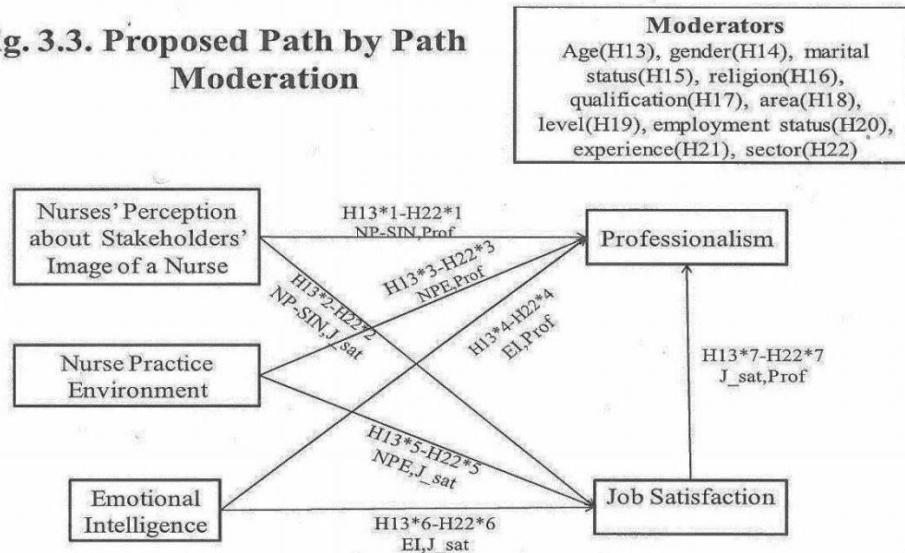
*Indicates the path in the four reference models (a, b, c, d) with the variable measuring respective nurses' perception about the stakeholders' image of a nurse.

H13-H22	There is a significant moderation effect of demographic variables on the relationship between the determinants, job satisfaction and professionalism among nurses.
H13	There is a significant moderation effect of age on the relationship between the determinants, job satisfaction and professionalism among nurses.
H14	There is a significant moderation effect of gender on the relationship between the determinants, job satisfaction and professionalism among nurses.
H15	There is a significant moderation effect of marital status on the relationship between the determinants, job satisfaction and professionalism among nurses.
H16	There is a significant moderation effect of religion on the relationship between the determinants, job satisfaction and professionalism among nurses.
H17	There is a significant moderation effect of qualification on the relationship between the determinants, job satisfaction and professionalism among nurses.
H18	There is a significant moderation effect of area of work on the

relationship between the determinants, job satisfaction and professionalism among nurses.

| H19 | There is a significant moderation effect of level of health care on the relationship between the determinants, job satisfaction and professionalism among nurses. |

| H20 | There is a significant moderation effect of employment status on the relationship between the determinants, job satisfaction and professionalism among nurses. |

| H21 | There is a significant moderation effect of experience on the relationship between the determinants, job satisfaction and professionalism among nurses. |

| H22 | There is a significant moderation effect of sector of health care on the relationship between the determinants, job satisfaction and professionalism among nurses. |

Overall model level

| H13a –H22a (NP-DIN) | There is a significant moderation effect of demographic variables on the relationship between the determinants, job satisfaction and professionalism among nurses. |

| H13b –H22b (NP-PIN) | There is a significant moderation effect of demographic variables on the relationship between the determinants, job satisfaction and professionalism among nurses. |

| H13c –H22c (NP-OHSIN) | There is a significant moderation effect of demographic variables on the relationship between the determinants, job satisfaction and professionalism among nurses. |

| H13d –H22d (NP-IN) | There is a significant moderation effect of demographic variables on the relationship between the determinants, job satisfaction and professionalism among nurses. |

Path by path moderation

Nurses' perception about stakeholders' image of a nurse and professionalism

(NP-SIN,Prof)

H13a1-H22a1	There is a significant moderation effect of demographic variables on the relationship between nurses' perception about doctors' image of a nurse (NP-DIN) and professionalism among nurses.
H13b1-H22b1	There is a significant moderation effect of demographic variables on the relationship between nurses' perception about patients' image of a nurse (NP-PIN) and professionalism among nurses.
H13c1-H22c1	There is a significant moderation effect of demographic variables on the relationship between nurses' perception about other hospital staffs' image of a nurse (NP-OHSIN) and professionalism among nurses.
H13d1-H22d1	There is a significant moderation effect of demographic variables on the relationship between the nurses' perceived image of a nurse (NP-IN) and professionalism among nurses.

Nurses' perception about stakeholders' image of a nurse and job satisfaction

(NP-SIN,J_Sat)

H13a2-H22a2	There is a significant moderation effect of demographic variables on the relationship between nurses' perception about doctors' image of a nurse (NP-DIN) and job satisfaction among nurses.
H13b2-H22b2	There is a significant moderation effect of demographic variables on the relationship between nurses' perception about patients' image of a nurse (NP-PIN) and job satisfaction among nurses.
H13c2-H22c2	There is a significant moderation effect of demographic variables on the relationship between nurses' perception about other hospital staffs' image of a nurse (NP-OHSIN) and job satisfaction among nurses.
H13d2-H22d2	There is a significant moderation effect of demographic variables on the relationship between the nurses' perceived image of a nurse (NP-IN) and job satisfaction among nurses.

Nurse practice environment and professionalism (NPE,Prof)

H13a3-H22a3   There is a significant moderation effect of demographic variables on the relationship between nurse practice environment and professionalism among nurses.

H13b3-H22b3   There is a significant moderation effect of demographic variables on the relationship between nurse practice environment and professionalism among nurses.

H13c3-H22c3   There is a significant moderation effect of demographic variables on the relationship between nurse practice environment and professionalism among nurses.

H13d3-H22d3   There is a significant moderation effect of demographic variables on the relationship between nurse practice environment and professionalism among nurses.

Emotional intelligence and professionalism (EI,Prof)

H13a4-H22a4   There is a significant moderation effect of demographic variables on the relationship between emotional intelligence and professionalism among nurses.

H13b4-H22b4   There is a significant moderation effect of demographic variables on the relationship between emotional intelligence and professionalism among nurses.

H13c4-H22c4   There is a significant moderation effect of demographic variables on the relationship between emotional intelligence and professionalism among nurses.

H13d4-H22d4   There is a significant moderation effect of demographic variables on the relationship between emotional intelligence and professionalism among nurses.

Nurse practice environment and job satisfaction(NPE,J_sat)

H13a5-H22a5   There is a significant moderation effect of demographic variables on the relationship between nurse practice environment and job satisfaction among nurses.

H13b5-H22b5   There is a significant moderation effect of demographic variables on the relationship between nurse practice environment and job satisfaction

among nurses.

| H13c5-H22c5 | There is a significant moderation effect of demographic variables on the relationship between nurse practice environment and job satisfaction among nurses. |
| H13d5-H22d5 | There is a significant moderation effect of demographic variables on the relationship between nurse practice environment and job satisfaction among nurses. |

Emotional intelligence and job satisfaction (EI,J_sat)

H13a6-H22a6	There is a significant moderation effect of demographic variables on the relationship between emotional intelligence and job satisfaction among nurses.
H13b6-H22b6	There is a significant moderation effect of demographic variables on the relationship between emotional intelligence and job satisfaction among nurses.
H13c6-H22c6	There is a significant moderation effect of demographic variables on the relationship between emotional intelligence and job satisfaction among nurses.
H13d6-H22d6	There is a significant moderation effect of demographic variables on the relationship between emotional intelligence and job satisfaction among nurses.

Job satisfaction and professionalism (J_sat,Prof)

H13a7-H22a7	There is a significant moderation effect of demographic variables on the relationship between job satisfaction and professionalism among nurses.
H13b7-H22b7	There is a significant moderation effect of demographic variables on the relationship between job satisfaction and professionalism among nurses.
H13c7-H22c7	There is a significant moderation effect of demographic variables on the relationship between job satisfaction and professionalism among nurses.
H13d7-H22d7	There is a significant moderation effect of demographic variables on the relationship between job satisfaction and professionalism among nurses.

CHAPTER 4

RESEARCH METHODOLOGY

Research involves controlled, systematic, rigorous and valid exploration and description of unknown concepts and establishment of association and causation which permit the precise prediction of outcomes in a given set of circumstances. It involves identification of knowledge gaps, verification of already known facts and identification of errors and limitations in past research (Kumar, 2011).

Research methods refer to the systematic steps adopted by the researchers in performing research operations or in studying the research problem in a logical manner (Kothari, 2004). Research methodology constitutes the path towards finding answers to the research questions (Kumar, 2011).

This chapter provides the details of the research methodology adopted in this study and includes the research design, approach, population, description of the setting, sample and sampling technique, development and description of the tools, data collection techniques and plan for data analysis.

4.1   RESEARCH DESIGN AND APPROACH

Research Design

"A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in the procedure." (Ackoff, Russell L.1961 as cited by Kothari, 2004)

A research design is the blueprint, the overall structure and strategy, or the detailed plan of investigation envisaged towards obtaining answers to the research problems or questions. It includes operationalization of the variables which are planned to be measured, selection of the sample of interest, collection of data which will be used in testing the hypotheses, and analyses of the results. In any investigation, selection of a suitable research design is essential for enabling the researcher for arriving at valid findings, conclusions and comparisons. (Kothari, 2004 & Kumar, 2011).

In this study a cross-sectional design, also termed as one-shot or status studies is used. This design is well suited for studies aimed at identifying the prevalence of a situation or problem, attitude or issue, using a cross-section of the population (Kumar, 2011).

Research Approach

A structured approach is appropriate in determining the level of a problem, phenomenon or issue. This approach is also categorized as quantitative research because the magnitude of the variation in a phenomenon situation and problem is quantified.

This co-relational study used a structured quantitative research approach to explore the influence of determinants of professionalism among nurses identified through in-depth review of literature and taking a theoretical base.

4.2   POPULATION AND RESEARCH SETTINGS

The study population is the respondents from whom the requisite information for finding answers to the research questions is obtained (Kumar, 2011). **"**Setting is the physical location and conditions in which data collection takes place in a study" (Polit & Beck, 2009).

The target population considered in this study is all the registered nurses working on the post of a staff nurse for a period of not less than six months in the various settings of health care delivery system within the state of Goa.

India has a mixed health-care delivery system, which includes the public and the private service providers. Most private healthcare providers provide secondary and tertiary health-care services. The public health-care is developed as a three-tier health care delivery system based on the population as shown in Fig. 4.1.
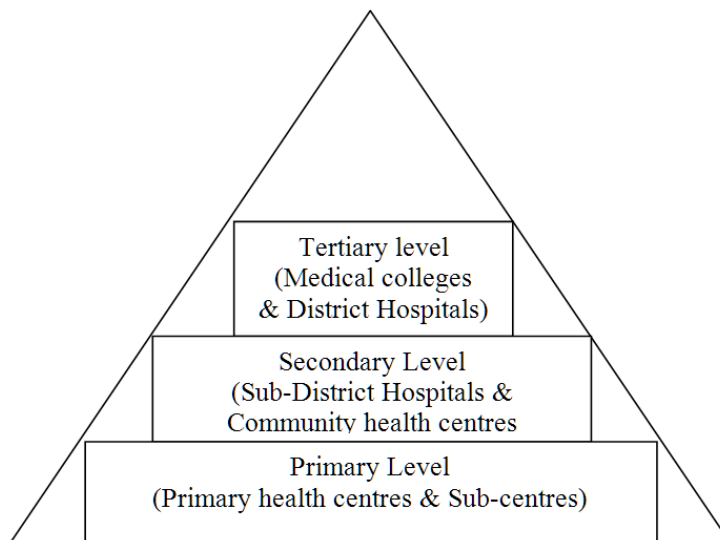
Fig. 4.1 ["Indian Public Health System. (National Rural Health Mission, Ministry of Health and Family Welfare, Government of India". cited by Chokshi et al., 2016)]

Although nurses' roles and responsibilities have greatly multiplied over the years, there is a considerable concern regarding their personal growth, professional development and career advancement. It has been observed across the country that there is a human resources crisis due to underemployment and unemployment despite of having immense potential in nursing. The retarded development of this profession seems to be largely due to the reality that, over the years, there has been no grave attention given to this discipline (Sridevy & Prassanna, 2010).

India is a rapidly developing country (Ragothaman et al., 2006, Singh, Sharma, & Jiao, 2016) where nurses correspond to the largest number of the overall health care workforce and are the frontline providers of quality and cost-effective health care delivery services within the country (Gill. 2011). This is evident through the provision of care from the high technology tertiary level to every door step even beyond the availability of doctors. Nurses' contribution towards the achievement of Sustainable Development Goals (SDG) and UN Millennium Development Goals (MDG) is indispensable; yet deficient in creating significant impact on health outcomes. Also, though nurses' roles and responsibilities have multiplied over the years, there is massive concern regarding the development and career growth of this workforce (Bagga, Jaiswal, & Tiwari, 2015).

Goa has one among the most far-reaching health systems in India and is considered as the best performing states in the affairs of health and medical care. In the government sector, Goa Medical College and Hospitals (GMCH) and the Directorate of Health Services (DHS) play an important role in the administration of health systems and services.

The state DHS plays a significant role in managing the overall administration related to the health care system and the services within the entire state. It primarily focuses on the provision of preventive, promotive, curative as well as rehabilitative services through the "primary health care" approach that has been acknowledged as one among the key instruments in accomplishing human resources development, acceleration of socio-economic progress and attainment of improved quality of life for all individuals. "Primary Health Care (PHC) refers to "essential health care" that is based on scientifically sound and socially acceptable methods and technology, which makes universal health care accessible to all individuals and families in a community" (WHO 1978; as cited by Muldoon, Hogg, & Levitt, 2006).

In the rural locale services are made available through the network of "Integrated Health and Family Welfare" delivery system. The Sub Centre is an extreme peripheral point of contact between the Public health care system and the people where in the services are generally managed by the "Multi Purpose Health Workers" (Male & Female) or the female Auxiliary Nurse and Midwives (ANM). The services at the Primary Health Centre (PHC) are manned by the Medical Officer and the registered nurses supported by other ancillary staff. The PHC's have attached 12 to 30 bedded hospitals and serve as referral units for sub-centres. The primary services at the PHCs are preventive, curative and promotive including family welfare services. The Community Health Centres (CHC) are headed by the Health Officer with additional four specialist doctors nurses and other supporting staff in a minimum 30 bedded hospital setup. It is a referral centre for the PHC's. Additionally, there are Rural Medical Dispensaries (RMD's) in inaccessible and remote areas manned by the R.M.O. and Pharmacist as regular out-patient services. There is one Sub-District Hospital (224 bedded) and two District Hospitals, in South Goa District (230 bedded) and North Goa District (300 bedded) respectively which are engaged in providing specialized services and serve as referral hospitals for the primary and the secondary level hospitals in the

public as well as the private sector. Additionally there are three specialized/general hospitals namely Leprosy Hospital (150 bedded, but the occupancy is usually a single digit), T.B. Hospital (180 bedded), and Cottage Hospital (60 bedded) under the administration of the DHS which also serve as referral hospitals (Citizen's Charter, DHS, 2013).

The Goa Medical College and Hospitals (GMCH) serve the general local public as well as the migrant and tourist population and is involved in providing tertiary level of health care services within the state. This tertiary level hospital has full-fledged departments and provides high technology specialty services including cardiology, endocrinology, nephrology, etc. It also serves as a referral for all the government, autonomous as well as private sector health care hospitals. This reputable "Escola Medico Cirurgica da Goa" was established during the Portuguese rule in 1842 and later in 1963, renamed as Goa Medical College. It is one amongst the oldest Medical Colleges in Asia. This over 1200 bedded hospital has an extensive tradition of providing quality health care services to all the sections of society. Institute of Psychiatry and Human Behaviour (IPHB), TB and Chest Disease Hospital, Rural Health and Training Centre and the Urban Health Centre are part of this establishment. Goa Medical College and Hospitals strive towards achieving excellence in patient care, and has been outstanding in training numerous medical, nursing and paramedical professionals who are involved in providing remarkable services to the public within the state and abroad. The vision of this college is to impart quality medical services to every section of society thereby improving the overall health scenario of the State. The college strives to maintain high standards of medical education in accordance with the guidelines of the Medical Council of India.

The autonomous sector hospital is a tertiary level 100 bedded health care setting that is engaged in providing specialised services to the employees of the organisation as well as the local public and the migrant population. This organisation backed with a vision to maintain high standards of patient care, is also equipped to provide high technology based advanced healthcare facilities.

In the private sector, the major private hospitals ranging with a bed strength of about 30 to 350 are engaged in providing high technology based and specialized care. However, these establishments face an additional burden of constant attrition and

recruitment of qualified nurses owing to lack of job security, long working hours, low pay structures and inadequate facilities.

This study considered all the levels of private, government as well as the autonomous health care sectors as the settings in this study with a view to obtain a comprehensive understanding of professionalism among the registered nurses and the determinants affecting their behavior within the individual sectors and levels of health care along with other demographic factors such as their age, gender, marital status, religion, qualification, area of work, experience and employment status.

The settings granting written permission to interact with the registered nurses for the purpose of data collection and having a minimum number of five registered nurses are considered for inclusion in this study as shown in Fig 4.2. and Table 4.1.
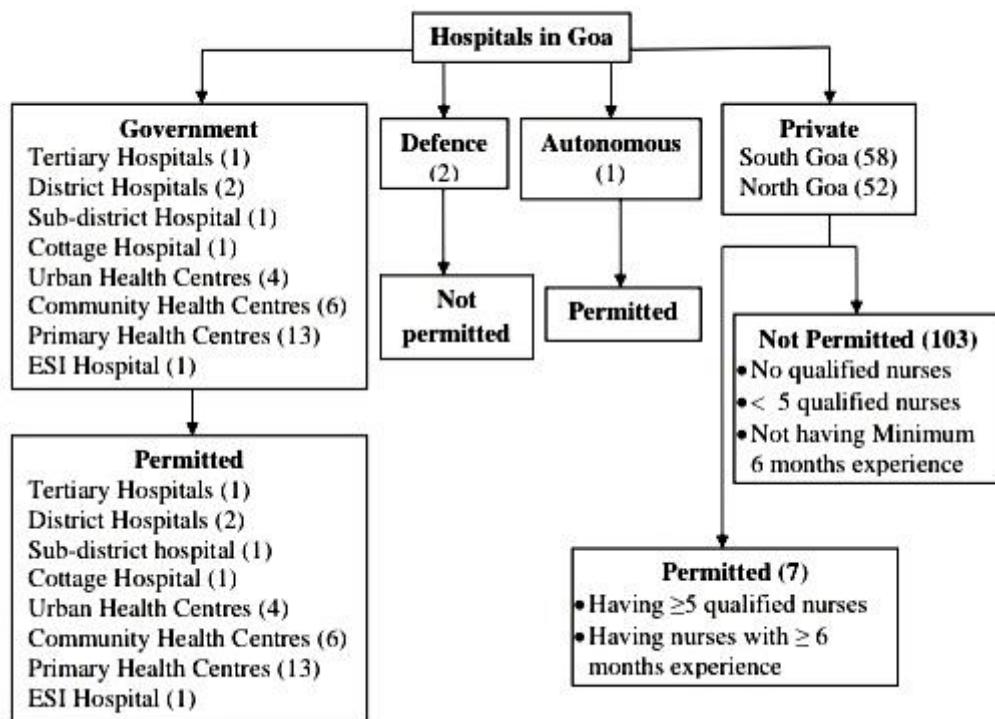
Fig 4.2 : Settings considered in this study

Table 4.1 : Population of registered nurses from the included settings

No.	Hospitals	Registered Nurses		
		Total	supervisors	Staff nurses
	Government Hospitals			
1	GMCH	625	49	576
2	DHS (District, SDH, CHC's/PHC's)	586	45	541
3	IPHB	62	12	50
4	ESI, Margao	16	1	15
	Autonomous Hospitals			
5	MPT, Vasco	35	10	25
	Private Hospitals			
6	Apollo, Margao	70	4	66
7	SMRC, Vasco	47	12	35
8	Vision, Mupusa	9	1	8
9	RG Stone, Porvorim	18	2	16
10	Health way, Panaji & Old Goa	88	8	80
11	Manipal, Dona Paula	92	10	82
12	Trinity, Panaji	14	1	13
	Total	**1662**	**155**	**1507**

4.3   SAMPLING FOR FINAL DATA COLLECTION

"The selected respondents constitute what is technically called a 'sample' and the selection process is called 'sampling technique". (Kothari, 2004).

The steps followed in the sampling process of this study:

1. Acquisition of the list of all the hospitals and clinics within the state from the Directorate of health services, Campal, Goa.

2. Obtaining the name list of nurses from Matron's office, Goa Medical College and Hospitals, Bambolim, Goa and Directorate of Health Services, Campal, Goa.

3. Obtaining written permission from the hospital authorities for data collection (**Appendix A**).

4. Purposive sampling of hospital clusters. Settings which permitted to interact with the staff nurses, had more than or equal to five registered nurses with not less than six months clinical experience.

5. Stratification of hospitals and departments based on the number of beds, types of services and the facilities available.

6. Obtaining the name list of registered nurses from each hospital and department and making the sampling frame.

7. Calculation of proportion of participants to be selected from each hospital/department.

8. Selection of sample using proportionate random sampling technique. Lottery method was used to select around 70% of sample from the sampling frame which included the names of the registered nurses from each department and hospital (planned to select about 1000 participants in view of number of variables needed for analysis) as shown in Table 4.2.

9. Allotment of code to each participant. A specific code was assigned to each sample for the purpose of maintaining confidentiality and anonymity of the sample.

Table 4.2 : Selected sample of registered nurses in the study

No.	Hospital	Total Nurses	Staff nurses*	Sample	Percentage
Public Sector					
1	GMCH	625	576	405	70.3
2	South Goa District Hospital	174	161	112	69.5
3	North Goa District Hospital	139	127	90	70.8
4	Sub-District Hospital	103	95	67	70.5
5	Cottage Hospital	14	13	9	69.2
6	CHC Canacona	26	25	18	72
7	CHC Churchorem	12	11	8	72
8	CHC Pernem	10	9	6	66.6
9	CHC Valpoi	13	12	8	66.6
10	PHC Balli	11	10	7	70
11	PHC Bicholim	10	9	6	66.6
12	PHC Candolim	8	7	5	71.4
13	PHC Marcaim,	7	7	5	71.4
14	PHC Dharbandora	12	11	8	72.7
15	PHC Quepem	12	11	8	72.7
16	PHC Sanguem	7	7	5	71.4
17	PHC Sankhelim	17	16	11	68.75
18	PHC Shiroda	11	10	7	70
19	ESI Hospital Margao	16	15	10	66.6
20	IPHB, Bambolim	62	50	35	70
	Total	1289	1182	830	70.2
Private Sector					
1	Manipal, Dona Paula	92	82	58	70.7
2	Trinity	14	13	9	69.2
3	Healthway (Old Goa/Panaji)	88	80	55	68.7
4	Vision	9	8	6	75
5	RG Stone	18	16	11	68.7
6	SMRC, Vasco	47	35	25	71.4
7	Apollo	70	66	45	68.1
Autonomous Sector					
1	MPT, Vasco	35	25	18	72
	Total	373	325	227	70
	Overall Total	1662	1507	1057	70

*the population in this study

Ethical Clearance/Considerations

Ethical approval was sought from the ethical committee, Directorate of Health Services, Government of Goa, and the institutional ethics committee, Goa Medical College and Hospitals before proceeding for the data collection (**Appendix B**). Similarly written permission from the management was obtained from individual public, private as well the autonomous hospital administrative heads (**Appendix A**). Written informed consent was obtained from every respondent after explaining the purpose, benefits, risks, anonymity and confidentiality assurance. Participants were also made aware that their participation is voluntary. No incentives were given to the nurses for their participation in the study (**Appendix C**).

4.4   DATA COLLECTION TOOLS

A. Identification of tools

Through an extensive review the following tools were identified for the purpose of data collection in this study.

• Code of Professional Conduct for Nurses: Indian Nursing Council (CPCN-INC) to measure the construct professionalism (**Appendix D**)

• Porter Nursing Image Scale (Porter & Porter, 1991) to measure nurses' perception about stakeholders'image of a nurse.

• Practice Environment Scale - Nursing Work Index (PES-NWI): (Lake, 2002) to measure nurse practice environment.

• Wong and Law Emotional Intelligence Scale (WLEIS, 2002) to measure emotional intelligence.

• The Minnesota Satisfaction Questionnaire (Weiss, Dawis, England and Lofquist. 1967. The 20 MSQ-short version) to measure job satisfaction (cited by Martins & Proenca, 2012).

B. Development of Tool

Nurse Professionalism Scale

The description of Nurse Professionalism Scale development has been detailed in Chapter 6 of this thesis - Scale Development.

C. Adaptation of tools

The description of adaptation of tools; Nurses' Perception about Stakeholders' Image of a Nurse" (NP-SIN), Nurse Practice Environment (NPE), Emotional Intelligence (EI) and Job Satisfaction" (JS) has been detailed in Chapter 5 of this thesis – Adaptation of tools.

D. Face validity through expert review

Face validity supports content validity and is used to verify whether the intended instrument appears to relate to the construct under study (Yaghmaie, 2003). The face validity of the tools was reviewed by four nursing teaching faculty, four senior clinical nurses and three faculty from management for readability, comprehensiveness, redundancy and appropriateness of the items **(Appendix F)**. Based on the feedback, a few items are re-worded and or reframed in simpler vocabulary without changing the meaning. The suggested changes are incorporated in the tools. In the tool "nurses' perception about stakeholders' image of a nurse", based on the suggestions in the item, "Competent versus Ineffective" the adjective "Ineffective" is replaced with "Incompetent", and in "Punctual versus Unreliable", the adjective "Unreliable" is replaced with "Unpredictable". In the Emotional intelligence scale; dimension: "Use of Emotion", the items are reframed as, "I always use my emotions to set goals for myself and then try my best to achieve them. "I always use my emotions to tell myself that I am a competent person". "I use my emotions to be a self-motivated person". "I always use my emotions to encourage myself to perform well". This process was completed in three rounds by resubmitting to and discussing the changes with the same experts.

E. Content Validation

Content validity is a fundamental step in the development of a new instrument wherein the judgement –quantification process is carried out which facilitates the revision of items on the basis of experts' feedback (Zamanzadeh et al., 2015). 'A measure has content validity when its items accurately represent the thing being measured' (Baumann & Kotyolo, 2009). The tools were sent for content validation to the experts from the field of nursing and health care management within the state as

well as out of state. Initially the tools were sent to 23 experts: 16 Ph. D. In Nursing and 7 Ph. D in Health care management faculty. The experts were requested to validate the tools on relevance and clarity with a 4-point rating scale (**Appendix G**). Fifteen experts provided valid response, comments and suggestions and 6 experts gave suggestions and comments only. Score of one and two was considered as zero and score of three and four were considered as one during calculation of item, dimension as well as overall scale content validity indices. The calculated I-CVI was above 0.87 and D-CVI and S-CVI were above 0.9. However, some experts suggested reconsideration and reframing of a few items. Changes were incorporated and the tools were resent for validation to 15 experts from among the initial pool of experts. Five experts from the field of nursing and three from the field of health care management validated the tools and provided their valuable comments and suggestions. The calculated I-CVI was between 0.86 and 1, D-CVI was between 0.87 and 1 and the S-CVI was between 0.94 and 1. (**Appendix H**).

4.5   DATA COLLECTION PROCESS

A.   Pilot study

Pilot test of a research instrument is carried out on a similar but not the sample population as the population which you are proposing to study (Kothari, 2004). Once the sampling process was complete, each participant was allotted a unique code number. This code number was indicated on the participant self data sheet for the purpose of identifying the participant. Initially it was decided by the researcher to give the data sheet, request the completion of response and collect it at the same time on one-to-one basis. However, due to the busy schedule of the participants it was impossible to do so. An attempt was made by requesting the authorities to allot all the participants present on duty at a time for duration of 30 minutes in order to complete the data sheets, so that the researcher could collect the data sheets immediately to ensure completeness and loss of sample. This request was not accepted. Pilot study was conducted using 50 samples from one private and two government settings to test the feasibility of conducting the research and identify need for modification of the scales used to measure the constructs. The researcher administered the tools after clear complete explanation and requested for the complete response from the sample. Difficulty was encountered in terms of low response or no response from participants on the tool; "nurses' perception about stakeholders' image of a nurse". When the

participants were asked the reason for non completion of the tool, they verbalized the difficulty in comprehending the method of rating using adjectives on a bipolar semantic differential scale and that they had previously never responded on such a tool. Hence after discussion with the guide the tool was changed from bipolar semantic differential scale to uni-polar scale with mixed positive and negative items.

B.   **Final Data Collection Process**

It was planned to collect the data through self report from registered clinical nurses. The researcher administered the tools (**Appendix I**) after clear and complete explanation to every participant regarding the filling of the data sheets which were personally administered to a total of 1057 registered nurses. To avoid researcher presence bias or compulsion for favourable responses and considering the demanding work schedule, the participants were given a period of one week to complete their responses on the tool. They were requested to provide complete data. To avoid high attrition, each datasheet was checked for completeness while receiving back. It was noticed that many participants had not completed their responses owing to their hectic work schedule. In case of incomplete datasheets, the participants were requested to complete the same within another week, after which the same were collected. Also, some participants who had lost or misplaced the datasheets were given new ones. Due to the busy schedule of the participants, and the shift duty, the researcher had to visit as many as ten times to receive the sheets back. The unique code was extremely useful in identifying the participants at every visit. Finally, a total of 909 self reported responses sheets were received. The data collection period was from April 2018 to October 2018. The area wise receipt of responses of sample is shown in table 4.3. On further check, 78 self reports were found to be incomplete. The final data responses used for analysis is shown in Table 4.4.

<p style="text-align:center">Table 4.3 : Area wise response of registered nurses.</p>

No.	Hospital	M	S	OG	Ped	E	Psy	Com	Total
	Public Sector								
1	GMCH	74	107	38	60	47			**326**
2	South Goa District Hospital	28	19	18	14	26			**105**
3	North Goa District Hospital	17	15	13	15	25			**85**
4	Sub-District Hospital	11	13	12	14	14			**64**
5	Cottage Hospital							9	**9**
6	CHC Canacona							14	**14**
7	CHC Churchorem							8	**8**
8	CHC Pernem							6	**6**
9	CHC Valpoi							8	**8**
10	PHC Balli							7	**7**
11	PHC Bicholim							6	**6**
12	PHC Candolim							5	**5**
13	PHC Marcaim							5	**5**
14	PHC Dharbandora							8	**8**
15	PHC Quepem							8	**8**
16	PHC Sanguem							5	**5**
17	PHC Sankhelim							11	**11**
18	PHC Shiroda							7	**7**
19	ESI, Hospital Margao							10	**10**
20	IPHB, Bambolim						26		**26**
	Total	**130**	**154**	**81**	**103**	**112**	**26**	**117**	**723**
	Private Sector								
1	Manipal, Dona Paula	15	18			18			**51**
2	Trinity*								**9**
3	Health way (Old Goa/Panaji)	12	14		8	17			**51**
4	Vision*								**6**
5	RG Stone*								**11**
6	SMRC, Vasco								**-**
7	Apollo	12	15			15			**42**
	Total	**45**	**52**		**8**	**55**			**186**
	Autonomous Sector								
1	MPT, Vasco	6	5			5			**16**
	Overall Total	**175**	**206**	**81**	**111**	**167**	**26**	**117**	**909**

M-Medicine; S-Surgery; OG-Obstetrics and Gynecology; Ped-Pediatrics;
E-Intensive Care Unit/Operation Theatre/Casualty; Psy-Psychiatry; Com-Community.
*Trinity, Vision and RG Stone are smaller hospitals managing patients in individual or twin sharing rooms.

Table 4.4 : Responses from registered nurses used for analysis.

No.	Hospital	Distributed	Received	Incomplete	Usable
	Public Sector				
1	GMCH	405	326	37	289
2	South Goa District Hospital	112	105	8	97
3	North Goa District Hospital	90	85	3	82
4	Sub-District Hospital	67	64	8	56
5	Cottage Hospital	9	9	1	8
6	CHC Canacona	18	14	3	11
7	CHC Churchorem	8	8	-	8
8	CHC Pernem	6	6		6
9	CHC Valpoi	8	8	-	8
10	PHC Balli	7	7	-	7
11	PHC Bicholim	6	6	2	4
12	PHC Candolim	5	5		5
13	PHC Marcaim,	5	5	-	5
14	PHC Dharbandora	8	8	-	8
15	PHC Quepem	8	8	1	7
16	PHC Sanguem	5	5	2	3
17	PHC Sankhelim	11	11	-	11
18	PHC Shiroda	7	7	-	7
19	ESI Hospital Margao	10	10		10
20	IPHB, Bambolim	35	26	2	24
	Total	**830**	**723**	**67**	**656**
	Private Sector				
1	Manipal, Dona Paula	58	51	6	45
2	Trinity	9	9	-	9
3	Healthway (Old Goa/Panaji)	55	51		51
4	Vision	6	6	-	6
5	RG Stone	11	11	-	11
6	SMRC, Vasco	25	-	-	-
7	Apollo	45	42	3	39
	Total	**227**	**186**	**11**	**175**
	Autonomous Sector				
1	MPT, Vasco	18	16	2	14
	Overall Total	**1057**	**909**	**78**	**831**

C. Data Cleaning

Data were examined for completeness and entered into SPSS version 25 for analysis. Following entry of 831 self reports, the data were checked for missing, incomplete responses and outliers. "Outliers are observations with unique combination of characteristics that are identifiable as distinctly different from the other observations", (Hair, Black, Babin, & Anderson, 2010). After excluding the data sheets with missing responses on items and the outliers, the usable self reported data sheets were 749. The data were further checked using descriptive statistics. Data distribution was examined for normality through scatter plots, skewness and kurtosis.

"The linearity of the relationship between the dependent and the independent variables represents the degree to which the change in the dependent variable is associated with the independent variables" (Hair, Black, Babin, & Anderson, 2010). It relates to the pattern of association between every pair of variables and the ability of the coefficient of correlation to sufficiently represent the relationship. Linearity fulfils the assumption that there is a linear relationship between each of the predictor and the dependent variable and that the residual or error, is uncorrelated with the predictors and is normally distributed (Leech, Barrett, & Morgan, 2005). Linearity evaluates the model for additivity and homogeneity which help predict the values that fall in a straight line wherein a stable unit change (slope) in dependent variable is the result of a stable unit change in independent variable (Hair, Black, Babin, & Anderson, 2010). In testing for linearity for the data in this study, highest values were obtained for the linear model for all the relations as compared to the values in the other models indicating linear relations among the variables as shown in Table 4.5.

Another condition that can pose problem is multi-colinearity, which arises when the inter-correlations among the set of predictor variables are high or when two or more predictor variables contain the same information. This condition can lead to inaccurate and/or misleading results. Colinearity is exhibited when there is high correlation between two independent variables and high correlation between three or more independent variables is termed as multicolinearity. Two independent variables are considered to exhibit complete colinearity when the coefficient of correlation among them is 1 and absolute no colinearity if the coefficient of correlation among them is 0. Direct measure estimate for multi-colinearity is tolerance. Tolerance is defined as the degree of variability of the specific or selected independent variable that is not explained by the other independent variables under study. The variance inflation factor (VIF) is the calculated value that is inverse of tolerance values. The cut of acceptable value of VIF is 3 to 5 (Hair, Black, Babin, & Anderson, 2010). In the present data, all the paths exhibit VIF values below 3 indicating absence of multi-colinearity among variables as shown in table 4.5. The graphs indicating linear relationship among variables are shown in **Appendix J**.

Table 4.5 : Linearity and Multicolinearity values among the variables.

		Linearity		Multicolinearity		
		F Value	Sig	Regression	VIF	Sig
Prof	J_Sat	72.746	.000	EI : D_img-NPEnv	1.055	.000
	Emot. Int	73.356	.000	NPEnv : D_Img—EI	1.039	.000
	NPEnv.	82.240	.000	D_Img : NPEnv –EI	1.068	.000
	Perc D_img	43.500	.000	EI : P_img-NPEnv	1.053	.000
	Pecr Pat_img	35.947	.000	NPEnv : P_Img—EI	1.036	.000
	Pecr OHS_img	52.041	.000	P_Img : NPEnv –EI	1.068	.000
	Perc S_img	29.682	.000	EI : OHS_img-NPEnv	1.042	.000
J_Sat	Emot. Int	58.751	.000	NPEnv : OHS_Img—EI	1.059	.000
	NPEnv	379.556	.000	OHS_Img : NPEnv –EI	1.068	.000
	Perc D_img	42.095	.000	EI : S_img-NPEnv	1.010	.000
	Pecr Pat_img	28.429	.000	NPEnv : S_Img—EI	1.037	.000
	Pecr OHS_img	22.064	.000	S_Img : NPEnv –EI	1.068	.000
	Perc S_img	15.374	.000			

4.6   SAMPLE CHARACTERISTICS

The demographic variables considered in this study are age, gender, marital status, religion, qualification, area of work, level of health care organisation, employment status, experience and sector of health care delivery system. A sample characteristic of registered nurses whose responses were found to be complete and were used for analysis is presented in table 4.6.

Table 4.6 : Sample Characteristics

No.	Demographic Variable	Classification	Frequency	Percentage
1	Age	Class1 (20-30 years)	375	50
		Class1 (30-40 years)	217	29
		Class1 (40-50 years)	122	16.3
		Class1 (50-60 years)	35	4.7
2	Gender	Male	53	7.1
		Female	696	92.9
3	Marital Status	Married	458	61.1
		Single	291	38.9
4	Religion	Christian	298	39.8
		Hindu	441	58.9
		Muslim	10	1.3
5	Qualification	GNM	422	56.3
		B.Sc. Nursing	319	42.6
		M.Sc. Nursing	8	1.1
6	Area of work	Medicine (M)	150	20
		Surgery (S)	163	21.8
		Obst – Gynec (OG)	75	10
		Pediatrics (Ped)	89	11.9
		Emergency (E)	164	21.9
		Psychiatry (Psy)	25	3.3

		Community (Com)	83	11.1
7	Level	Tertiary	514	68.6
		Secondary	185	24.7
		Primary	50	6.7
8	Employment	Permanent	486	64.9
		Temporary	263	35.1
9	Experience	Novice	238	31.8
		Competent	262	35
		Expert	249	33.2
10	Sector	Private	151	20.2
		Government	586	78.2
		Autonomous	12	1.6

4.7 RELIABILITY OF TOOLS

Test of reliability is an important test of measurement for assessing the quality of instruments (Kothari, 2004). 'A scale or test is reliable to the extent that repeat measurements made by it under constant conditions will give the same result' (Moser & Kalton 1989 cited by Kumar, 2011). It is an estimation of the degree of consistency amid multiple measurements of a variable (Hair, Black, Babin, & Anderson, 2010). Reliability test for internal consistency for all the tools was performed and the cronbach alpha values were above 0.7 as shown in Table 4.7.

Table 4.7 : Reliability of Tools

No.	Scale	No. of items	Alpha Value
1	Nurse Professionalism	38	.872
2.1	Nurses' Perception about Doctors' Image of a Nurse (NP-DIN)	14	0.795
2.2	Nurses' Perception about Patients' Image of a Nurse (NP-PIN)	14	0.812
2.3	Nurses' Perception about Other Hospital Staffs' Image of a Nurse (NP-OHSIN)	14	0.815
2.4	Nurses' Perception about Image of a Nurse (NP-IN)	14	0.835
3	Nurse Practice Environment	26	0.928
4	Emotional Intelligence	16	0.812
5	Job Satisfaction	20	0. 865

4.8   DATA ANALYSIS TECHNIQUES.

4.8.1 General Linear Model program (GLM) and repeated measures ANOVA in SPSS.

This analytical technique creates the "Within-Subjects Factor" which is considered as an independent variable from among the two or more existing variables which then are considered as the levels of the new independent variable (Leech, Barrett, & Morgan, 2005). This technique was used to test the difference in the nurses' perception about stakeholders' image of a nurse.

4.8.2.a Structural Equation Modeling (SEM)

Structural Equation Modeling (SEM) in IBM SPSS AMOS Version 22 is used for data analysis. It is a "multivariate technique combining aspects of factor analysis and multiple regression that enables a researcher to simultaneously examine a series of interrelated dependence relationships among the measured variables and latent constructs as well as between several other latent constructs" (Hair, Black, Babin, & Anderson, 2010). It explains relationships among multiple variables and is beneficial in testing theories containing multiple equations that involve dependence relationships. Hypotheses are tested using path analysis for estimating the relationships between constructs in the model. "Path analysis uses bivariate correlations to estimate relationships in a system of structural equations. The process estimates the strength of each structural relationship in a path diagram" (Hair, Black, Babin, & Anderson, 2010).

4.8.2.b Interaction Effects using Interaction-Moderation analysis in SEM

Interaction effects among explanatory constructs are a significant part of several social theories. Analyses of these effects among variables using regression techniques do not control measurement errors and thereby have low power. Hence, latent interaction modeling with structural equation modeling (SEM) is proposed as a enhanced alternative in testing for interaction effects. The likelihood of controlling for various kinds of random as well as non-random measurement errors is one of the key advantage of using latent variables and SEM instead of simple regression (Steinmetz, Davidov, & Schmidt, 2011).

The interaction effects are the combined effects of two independent predictor variables that are tested along with the individual main effects. Multiple moderated regression is identified as the central technique for modeling interaction between the observed variables. (Cohen, Cohen, West, & Aiken, 2003 as cited by Marsh et al.,

2012). Kenny and Judd (1984) proposed the use of SEM for testing interaction effects as it permits correction for measurement error and suggested the use of possible products of indicators of the two interacting variables as indicators of the interaction variable (Saris & Coenders, 2007; Coenders et al., 2008). Two way interactions are used to test the interaction hypotheses in which the independent variables are first standardized following which the product variables are created and then tested (Singh & Sharma, 2016). If the slope relating the continuous exogenous predictor variable and endogenous criterion variable changes systematically (becomes stronger, weaker, changes signs) across levels of a second predictor, the augmentation could be due to the inclusion of the interaction term that is added to the structural model. Such a change is often considered as an interaction effect (Kenny & Judd, 1984; as cited by Harring et al., 2015).

4.8.2.c Mediation Effects

One of the hypotheses involves testing for mediation effect between the independent and the dependent variables. A brief description of the testing for mediation is summarized in this section.

Mediating effect is the effect of another third variable influencing the relationship between two different constructs. To understand the mediation effect of a variable, it is required to test the model for direct as well as indirect effects. Direct effect is the relationship between the independent and the dependent variable which is shown using a single headed arrow. Indirect effect is the relationship which is indicated through a sequence of relationships that involves at least one intervening variable. Thus indirect effect is indicated through a sequence of more than one direct effect.

4.8.2.d Moderation Effects using Multi-Group Moderation Analysis

Moderating effects is the effect of another third variable altering the relationship between two other constructs. The relationship between two variables alters based on the amount/level of the moderator. Moderation involves testing of structural model estimates, and is thus considered as an extension of multi-group analysis.

Multi-group analysis is a type of SEM analysis in which two or more samples of participants are compared using similar models. On any model parameter(s), assessment of similarities between groups is done using between groups constraints.

The broad objective is to find if there is a difference between individual group models.

Estimation of the first group model is done by separately calculating path estimates for each group. Then estimation of the second group model is done by constraining the path estimate of interest to be equal between groups. Differences between models are compared using a chi-square difference test which indicates if there is a significant decrease in the model fit (increase in the chi-square) after the estimates are constrained to be equal. A difference between models that is statistically significant indicates difference in the path estimates and indicates that moderation does exist. While testing for moderation, the researcher looks out for significant difference in the two models that will support the hypothesis that there is a difference in the path estimates.

CHAPTER 5

ADAPTATION OF TOOLS

Cross-cultural adaptation is oriented towards gauging a phenomenon fundamentally with the fabrication of an equivalent instrument which facilitates investigation of cross-cultural differences (Guillemin, Bombardier, & Beaton, 1993). With the augmented globalization, increased global communication among researchers and the flourishing of multinational and multicultural research ventures, the need for reliable and valid measures which can be used in different languages and different cultures has become critical. There has been a rising need to adapt and use measurement tools in languages other than the source language to capture cross-cultural data that is regarded as increasingly essential for the comprehension of human behavior and the psychological processes (Van Widenfelt et al., 2005). The cross-cultural adaptation of an instrument in a different country, language and/or culture necessitates achievement of equivalence between the original and target versions of the instrument.

The guidelines outlined for translation and cultural adaptation of measurement tools in psychology by Van Widenfelt et al., (2005) following literature review in cross-cultural adaptation in medical, sociological, and psychological domains has been used for adaptation of tools in this study.

Steps identified for translation and cultural adaptation of measurement tools (Guillemin, Bombardier, & Beaton, 1993; Van Widenfelt et al., 2005)

1. Contacting the Original Author

2. Translation and Back Translation: Creating a Translation Team and Team Procedures and Guidelines

3. Altering, Adding and Deleting Items

4. Translation of Instructions, Response Categories and Scoring Materials

5. Back-Translation

6. Pretest or Pilot Data

7. Data Collection and Analyses

5.1 CONTACTING THE ORIGINAL AUTHOR

Prior to getting into the task of translation of an instrument for cross cultural adaptation it is imperative to find out the existence of a version of the instrument in the language and/or culture of interest. Hence, contacting the original author, reviewing dissertations and journals is greatly recommended. Also, discussion with the original author can facilitate overcoming of difficulties and improved quality translation. In this study the researcher tried to contact authors of all the original tools through email and seek their permission to use the instrument or the modified, adapted version   (**Appendix E**).

5.2 TRANSLATION AND BACK TRANSLATION

Translation and back-translation of instruments is not required if the instrument is adapted in a different culture in a similar language (Guillemin, Bombardier, & Beaton, 1993). The domain of the professionals involved in the translation process and their experience in the area or the construct under study as well as the cultural context and the target population can influence the result of a translation. Involving a domain specific translator in the adaptation process will be helpful in the phrasing of items that might be crucial (Guillemin, Bombardier, & Beaton, 1993; Van Widenfelt et al., 2005).

All the tools adapted in this study were available in English, hence the translation of these tools was not considered as mandatory. However, a panel of four nursing teaching faculty, four senior clinical nurses and three faculty from management were consulted during the adaptation process of the tools. Consultation of thesaurus dictionary was also done to get clarity and relevant meaning for altering and merging or deleting repeated and redundant items based on recommendations by Guillemin, Bombardier, & Beaton (1993).

5.3 ALTERING, ADDING AND DELETING ITEMS

Altering Items: Alterations in an item may be essential to achieve acceptable, equivalent words for the respondents that will capture the item or expression (Guillemin, Bombardier, & Beaton, 1993).

Generating New Items: New items can be added in situations where the researcher seeks either to replicate a factor or capture the construct in a new culture. Desirably the generation of new items in the instrument is best done in collaboration or consultation with the original author.

Deleting Words, Items, or Scales: In cases where the researchers finds that part of an item, entire item or the entire scale is not appropriate for use in a new culture, the whole or part item(s) may be deleted. The review committee might suggest modification or elimination of ambiguous irrelevant items and generation of substitute items that better fit the target cultural settings while still maintaining the overall concept of the deleted items (Van Widenfelt et al., 2005).

Porter Nursing Image Scale

Porter Nursing Image Scale (1991) designed to assess nurses' self image consisted of 30 randomly matched paired bipolar adjectives. This tool was used as a 7- point likert scale ranging from 1-7 with the low scores indicating strong agreement with the items on the left side of the scale and the highest score indicating strong agreement with the adjectives on the right side. These 30 items were grouped under three main dimensions: interpersonal power, interpersonal relations and intrapersonal ability **(Appendix G).**

In this study the scale is adapted to capture the nurses' perception about image of a nurse by different stakeholders. Based on the discussion with and guidance from experts from nursing and management, it was decided to decrease the number of items. Item reduction is done by checking the synonyms of the adjectives having the same meaning. Two items; Honest versus dishonest and punctual versus unreliable are added based on the experts comments and suggestions which were considered to be relevant and appropriate for inclusion in this tool. The number of items in the bipolar semantic differential scale was reduced to 14 as shown in table 5.1. The original authors were mailed the copy of the adapted version for seeking permission. Their comments and suggestions are appended in **Appendix E.**

Table 5.1 : Item reduction/alteration in Nurses' Perception about Stakeholders' Image of a Nurse

No.	Dimensions								
	Inter-Personal Power								
1	Powerful/ Dominant / Influential/ Controlled/ Leader/Strong/Active	1 2 3 4 5 6 7							Submissive/Passive/ Inactive/Weak/follower
2	Confident/Bold	1 2 3 4 5 6 7							Uncertain/Ineffective /Timid/Emotional
3	Intelligent	1 2 3 4 5 6 7							Unintelligent/Dumb
4	Independent/Autonomous	1 2 3 4 5 6 7							Dependent
5	Professional/Competent/ Scientific/Knowledgeable	1 2 3 4 5 6 7							Technical/ Non-Scientific/Inefficient
	Inter-Personal Relations								
6	Nurturing/ Compassionate/ Warm/Sympathetic	1 2 3 4 5 6 7							Non-caring/Insensitive Indifferent/Cold
7	Friendly/Outgoing/Cheerful	1 2 3 4 5 6 7							Gloomy/Reserved
8	Respectful/Considerate/ Patient	1 2 3 4 5 6 7							Discourteous/Rude/Hasty
9	Responsible	1 2 3 4 5 6 7							Irresponsible
10	Compromising/Collaborative	1 2 3 4 5 6 7							Uncooperative /Rigid
	Intra-Personal Ability								
11	Organized/Neat	1 2 3 4 5 6 7							Careless/ Chaotic/Sloppy Unorganised/Unprepared
12	Rational/Logical/Controlled	1 2 3 4 5 6 7							Unreasonable/Illogical/ Intutive
13	Punctual/Prompt	1 2 3 4 5 6 7							Unreliable
14	Honest/Sincere	1 2 3 4 5 6 7							Dishonest

Nurse Practice Environment

This scale developed by Lake (2002) and used to measure nurse practice environment is a 31 item standardised scale widely used in research work. However, in this study this scale is adapted by deleting and/or merging some items which were considered as capturing same data and adding items found in literature, based on personal experience, discussion with the experts, their comments and suggestions which were considered to be relevant and appropriate for inclusion in this tool as shown in Table 5.2.

Table 5.2: Items reframed/deleted/added in Nurse Practice Environment Scale

No.	Dimension	
	Original items	Reframed/merged/deleted/added items
I	**Nurse Participation in Hospital Affairs**	
1	Staff nurses are involved in the internal governance of the of the hospital	I have opportunity to participate in hospital policy decisions and nursing department committees
2	Opportunity for staff nurses to participate in policy decisions.	
3	Staff nurses have the opportunity to serve on hospital and nursing department committees	
4	Many opportunities for advancement of nursing personnel	There are opportunities for advancement of nursing personnel.
5	Career development/clinical ladder opportunity	
6	An administration who listens to and responds to employee concerns	The administration listens and responds to staff on daily problems and procedures
7	Nursing administrators consult with staff on daily problems and procedures	
8	A director of nursing highly visible and accessible to staff	The matron is always visible and accessible to staff
9	A chief nursing executive equal in power and authority to other top level hospital executives	The matron is equal in power and authority to other top level hospital executives
II	**Nursing Foundations for Quality of Care**	
10	Use of nursing diagnoses	Deleted based on personal experience and experts' comments as not applicable in current setting
11	An active quality assurance program	There is quality assurance program which helps in maintaining and improving quality of nursing care
12	A preceptor program for newly hired nurses	There is orientation program for newly hired nurses
13	Nursing care is based on a nursing, rather than a medical model.	Deleted based on experts' suggestions as not clear and not relevant
14	Patient care assignments that foster continuity of care, i.e., the same nurse cares for the patient from one day to the next.	Deleted: based on personal experience and experts' suggestions as not applicable in current setting
		Added: I have opportunity to make independent nursing care decisions (Erickson et al., 2004)
15	A clear philosophy of nursing that pervades the patient care environment	There is a clear philosophy of nursing that permeates the patient care environment
16	Written, up-to-date nursing care plans	Deleted based on personal experience and

	for all patients.	experts' comments as not applicable in current setting
17	High standards of nursing care are expected by the administration	Deleted based on personal experience and experts' comments as not applicable in current setting
18	Active in-service/ continuing education programs for nurses	There are in-service/continuing education programs for nurses
19	Working with nurses who are clinically competent	I have opportunity to work with nurses who are clinically competent
		There is clear description of nurses' roles and responsibilities (Oshvandi et al., 2008; Duffield et al., 2011b)
III	**Nurse Manager Ability, Leadership, and Support of Nurses**	
20	A head nurse who is a good manager and leader	The head nurse has good managerial and leadership ability
21	A head nurse who backs up the nursing staff in decision making, even if the conflict is with a physician	The head nurse backs up the nursing staff in decision making, even if the conflict is with the physician.
22	A supervisory staff that is supportive of the nurses	The head nurse is supportive of the nurses
23	Supervisors use mistakes as learning opportunities, not criticism	Deleted based on experts' comments as not clear and not relevant
24	Praise and recognition for a job well done	I get praise and recognition for a job well done
25	Flexible or modified work schedules available	Flexible work schedules are available
IV	**Staffing and Resource Adequacy**	
26	Enough staff to get the work done	There are sufficient registered nurses to provide quality patient care
27	Enough registered nurses to provide quality patient care	
28	Adequate support services which allow spending time and fostering relationship with patient and family.	Deleted based on personal experience and experts' comments as not applicable in current setting
29	Enough time and opportunity to discuss patient care problems with other nurses.	There is sufficient time and opportunity to discuss patient care problems.
		Added: I have sufficient access to adequate information required to provide good patient care. (Erickson et al., 2004; Manojlovich & Decicco, 2007; Prudy, 2011)
		Added: There is adequate time to guide students and new recruits (Duffield et al., 2009; Darega et al., 2016)

		Added: There is adequate time to consult other professionals if necessary. (Erickson et. al. 2004; Manojlovich & Decicco, 2007).
		Added: There is adequate supply of material resources to provide quality patient care (Oshvandi et al., 2008; Prudy, 2011; Darega et al., 2016).
V		**Collegial Nurse–Physician-Team Relations**
30	A lot of teamwork between nurses and doctors	There is a lot of teamwork between nurses and doctors
31	Physicians and nurses have good relationships	Physicians and nurses have good team relationships
32	Functional collaboration between nurses and physicians.	Deleted based on personal experience and experts' comments as same as above two items
33	Good relationships with other departments	There is good relationships with other team members
		Added: There is adequate respect for team members (based on experts' comments)

Emotional Intelligence Scale

Wong and Law Emotional Intelligence Scale (WLEIS. 2002) was used to capture the self reported data related to the emotional intelligence of nurses. Based on the discussion with the experts, their comments and suggestions the items were reframed to make them more personal without altering the meaning. No new items were added nor were any items deleted from the original scale at this stage from the original tool as shown in table 5.3.

Table 5.3: Items reframed in Emotional Intelligence Scale

	Original items	Reframed items
	Dimensions	
I	**Others' Emotional Appraisal**	
1	Always knows his/her friends' emotions from their behavior.	I always know others' emotions from their behavior.
2	Is a good observer of others' emotions.	I am a good observer of others' emotions.
3	Is sensitive to the feelings and emotions of others	I am sensitive to the feelings and emotions of others.
4	Has good understanding of the emotions of people around him/her.	I have good understanding of the emotions of people around me.
II	**Regulation of Emotion**	
5	Is able to control his/her temper and handle difficulties rationally.	I am able to control my temper and handle difficulties rationally.
6	Is quite capable of controlling his/her own emotions.	I am quite capable of controlling my own emotions.
7	He/she can always calm down quickly when he/she is very angry.	I can always calm down quickly when I am very angry.
8	Has good control of his/her own emotions.	I have good control of my own emotions.
III	**Self Emotional Appraisal**	
9	Has a good sense of why he/she has certain feelings most of the time.	I have a good sense of why I have certain feelings most of the time.
10	Has good understanding of his/her own emotions.	I have good understanding of my own emotions
11	Really understands what he/she feels.	I really understand what I feel.
12	Always knows whether or not he/she is happy	I always know whether or not I am happy
IV	**Use of Emotion**	
13	Always sets goals for himself/herself and then tries his/her best to achieve them.	I always set goals for myself and then try my best to achieve them.

14	Always tells himself/herself he/she is a competent person.	I always tell myself that I am a competent person.
15	Is a self-motivated person	I am a self-motivated person
16	He/she would always encourage himself/herself to try his/her best.	I always encourage myself to perform well.

Job satisfaction

The 20 MSQ-short version of the Minnesota Satisfaction Questionnaire (Weiss, Dawis, England and Lofquist. 1967) is used to measure job satisfaction among nurses in this study. Based on the discussion with the experts, their comments and suggestions few items are reworded and a few are reframed in this scale as shown in Table 5.4.

Table 5.4 : Items reframed in Job Satisfaction Scale

	Original items	Reframed items
	Dimensions	
No.	**How satisfied are you with this aspect of your job**	
I	**Intrinsic Satisfaction**	
1	Being able to keep busy all the time.	Being able to keep yourself busy all the time
2	The chance to work alone (autonomously) on the job.	The chance to work alone on the job.
3	The chance to do different things from time to time.	The chance to do different things from time to time.
4	The chance to be "somebody" in the community.	The chance to be someone in the community
5	Being able to do things that don't go against my conscience.	Being able to do things that don't go against your conscience.
6	The way my job provides for steady employment.	The way your job provides job security.
7	The chance to do things for other people.	The chance to do things for other people.
8	The chance to tell people what to do.	The chance to tell people what to do.
9	The chance to do something that makes use of my abilities.	The chance to do something that makes use of your abilities.
10	The freedom to use my own judgment.	The freedom to use your own judgment
11	The chance to try my own	The chance to try your own methods of doing the job

methods of doing the job

12	The feeling of accomplishment I get from the job	The feeling of accomplishment you get from the job.
II	**Extrinsic Satisfaction**	
13	The way my boss handles his/her workers	The way your supervisor handles the nurses.
14	The competence of my supervisor in making decisions	The competence of your supervisor in making decisions.
15	The way company policies are put into practice.	The way hospital policies are put into practice.
16	My pay and the amount of work I do.	Your pay and the amount of work you do.
17	The chances for advancement on this job	The chances for advancement on this job.
18	The praise I get for doing a good job.	The praise you get for doing a good job.
III	**General Satisfaction**	
19	The working conditions.	The working conditions.
20	The way my co-workers get along with each other.	The way your co-workers get along with each other

Social Desirability Scale

"Socially desirable responding (SDR) is typically defined as the tendency to give positive self-descriptions" (Paulhus, 2002). Pressure of social desirability, the perceived value of projecting an image which represents socially approved behavior is a major element of self presentation (Nunnally, 1978; cited by Hays, Hayashi, & Stewart, 1989). The short SDRS measure consisting of five items (SDRS-5, Hays 1989) was incorporated to combat the issue of social desirable responding. The social desirability five–item scale by Hays, Hayashi, & Stewart, 1989 is adapted in this study. In the use of this scale also, based on the discussion with the experts, their comments and suggestions some items are reframed without changing the meaning as shown in Table 5.5.

Table 5.5 : Items reframed in Social Desirability Responding Scale

No.	Items	Reframed items
1	No matter whom I am talking to, I am always a good listener	

2	There have been occasions when I took advantage of someone	
3	I sometimes try to get even rather than forgive and forget	I sometimes try to be even rather than forgive and forget
4	I am always courteous even to people who are disagreeable	I am always courteous even to people who do not agree with me
5	I sometimes feel resentful when I do not get my way	I sometimes feel resentful (upset) when I do not get the way I want

5.4 TRANSLATION OF INSTRUCTIONS, RESPONSE CATEGORIES, AND SCORING MATERIALS

Careful translation of the instructions of the adapted instrument is also important. Instructions can influence the responses on the instruments. The categories of responses or the level of scale on the items should also be cautiously translated and scaled similarly as the original version (Van Widenfelt et al., 2005).

In the adapted **Nurses' Perception about stakeholders' Image of a nurse Scale,** the instructions for the respondents for filling in their responses and the scoring were retained as in the original Porter scale.

The original **Nurse Practice Environment Scale** was a four point response scale from, "strongly agree, agree, disagree, and strongly disagree" with higher numbers indicating greater agreement. For each item the respondents were asked to indicate the extent of agreement that the items were present in their current job. In this study the respondents were instructed to fill in their response on a five point scale (1= strongly disagree; 2= disagree; 3= neutral: 4= agree; 5= strongly agree). They were requested to indicate the extent to which each item applied to and was identified in their practice environment. The original authors of this tool also were mailed the copy of the adapted version of the tool including the respondent instructions for seeking their permission comments and suggestions. The response is appended in **Appendix E**.

The original authors of the tool used to measure **Emotional Intelligence** had devised the scale measurement as a 7-point Likert scale. In this study five point scale is used (1= strongly disagree; 2= disagree; 3= neither disagree nor agree; 4=agree; 5= strongly agree) to maintain consistency with the measurement levels with other tools.

The respondents were asked to indicate the extent to which each item applied to them using the items on the scale. The original authors were mailed the copy of the adapted version for seeking their permission, comments and suggestions which is appended in **Appendix E**

The original **Job Satisfaction Scale** was used as a 5-point Likert scale (1=very dissatisfied, 2=dissatisfied, 3=can't decide if satisfied or dissatisfied, 4=satisfied and 5=very satisfied) "with this aspect of my job". In the current study the respondents were requested to indicate the extent to which each item applied to them using the five point scale (1= very dissatisfied; 2 =dissatisfied; 3 =can't decide; 4 =satisfied; 5 =very satisfied).

The instruction in the original **Social Desirability Responding Scale** was "listed below are a few statements about your relationship with others. How much is each statement TRUE or FALSE for you". The scale used was a five point scale from "1=definitely true, 2=mostly true, 3=don't know, 4=mostly false and 5=definitely false". In this study the items were merged with other scale and the scale used was "five point scale (1= strongly disagree; 2= disagree; 3= neither disagree nor agree; 4= agree; 5= strongly agree), also to maintain uniformity and consistency with other scales.

5.5   CONTENT VALIDATION.

Cross-cultural adaptation should provide for some measure of quality and consistency in the content validity as well as face validity of the adapted instrument (Beaton, Bombardier, Guillemin, & Ferraz, 2000). Content validity is a fundamental step in the development of a new instrument wherein the judgement–quantification process is carried out which facilitates the revision of items on the basis of experts' feedback (Zamanzadeh et al., 2015). 'A measure has content validity when its items accurately represent the thing being measured' (Baumann & Kolotylo, 2009). The tools were sent for content validation to the experts from the field of nursing and health care management within the state as well as out of state. Initially the tools were sent to 23 experts: 16 Ph.D. in Nursing and 7 Ph.D. in Health care management. The experts were requested to validate the tools on relevance and clarity with a 4-point rating scale. Besides, these tools were also sent to the original authors of the tools

with the request for validation. The authors of the tools gave their comments on the adaptation of the tools. Fifteen experts provided valid response, comments and suggestions and 6 experts gave suggestions and comments. Score of one and two was considered as zero and score of three and four were considered as one during calculation of item as well as scale content validity indices. The calculated I-CVI was above 0.87, D-CVI and S-CVI were above 0.9. However, some experts suggested reframing a few items. Changes were incorporated and the tools were resent for validation to 15 experts from among the initial pool of experts. Five experts from the field of nursing and three from the field of health care management validated the tools and provided their valuable comments and suggestions. The calculated I-CVI was between 0.86 and 1, D-CVI is between 0.87 and 1 and the S-CVI was found to be between 0.94 and 1. (**Appendix H**).

Face validity through expert review

Face validity supports content validity and is used to verify whether the intended instrument appears to relate to the construct under study (Yaghmaie, 2003). The face validity of the tools was reviewed by four nursing teaching faculty, four senior clinical nurses and three faculty from management for readability, comprehensiveness, redundancy and appropriateness of the items. Based on the feedback, a few items are re-worded and or reframed in simpler vocabulary without changing the meaning. The suggested changes are incorporated in the tools. In the tool perceived stakeholders' image, based on the suggestions in the item, "Competent versus Ineffective" the adjective "Ineffective" is replaced with "Incompetent", and in "Punctual versus Unreliable", the adjective "Unreliable" is replaced with "Unpredictable". Also, based on the suggestions of experts and the original author, this tool was adapted to capture data from the registered nurses related to perceived public image of a nurse as viewed by different stakeholders, such as doctors, patients, other hospital staff and nurses themselves.

In the Emotional intelligence scale; dimension: "Use of Emotion", the items are reframed as, "I always use my emotions to set goals for myself and then try my best to achieve them. "I always use my emotions to tell myself that I am a competent person". "I use my emotions to be a self-motivated person". "I always use my emotions to encourage myself to perform well". This process was completed in three rounds by resubmitting to and discussing the changes with the same experts.

5.6 PRETEST OR PILOT DATA

The closing stage of an instrument adaptation process is the pretest. Once the prefinal version of a translation is accepted, it is essential to administer it on a small group, ideally, between 30 and 40 respondents, who is representative of the target population. It is also suggested to include respondents with varying demographics. (Guillemin, Bombardier, & Beaton, 1993; Beaton, Bombardier, Guillemin, & Ferraz, 2000). This ascertains that the adapted version still retains its equivalence in the applied situation. Testing for reliability and validity is possible during the pretesting process, however needs larger sample sizes. (Beaton, Bombardier, Guillemin, & Ferraz, 2000)

Pilot study was conducted using 50 samples with varying demographic characteristics from one private and two government settings to test the feasibility of conducting the research and identify need for modification of the scales used to measure the constructs. The researcher administered the tools after clear complete explanation and requested for the complete response from the sample. Difficulty was encountered in terms of low response or no response from participants on the tool; Nurses' Perception about Stakeholders' Image of a Nurse. When the participants were asked the reason for non completion of the tool, they verbalized the difficulty in comprehending the method of rating using adjectives on a bipolar semantic differential scale and that they had previously never responded on such a tool. Hence after discussion with the guide the tool was changed from bipolar semantic differential scale to uni-polar scale with mixed positive and negative items as shown in **Appendix I**.

5.7 DATA COLLECTION AND ANALYSES

The researcher administered the tools after clear and complete explanation to every participant as well as the supervisors and the colleagues and requested for their complete response. The data sheets were administered to a total of 1057 registered nurses personally. They were given clear and complete explanation regarding the filling of the data sheets. To avoid researcher presence bias or compulsion for favourable responses and considering the demanding work schedule, the participants were given a period of one week to complete their responses on the tool. They were

requested to provide complete data. To avoid high attrition, each datasheet was checked for completeness while receiving back. It was noticed that many participants had not completed their responses owing to their hectic work schedule. In case of incomplete datasheets, the participants were requested to complete the same within another week, after which the same were collected. Also, some participants who had lost or misplaced the datasheets were given new ones. A total of 909 self reported responses sheets were received out of which 78 self reports were found to be incomplete resulting in 830 data sheets. Subsequently, following data cleaning 749 usable response sheets were included in the analysis.

5.8   ANALYSIS/TESTING OF THE ADAPTED SCALES

Testing for the adapted tool for the psychometric properties is highly recommended as an essential component of the adaptation process (Beaton, Bombardier, Guillemin, & Ferraz, 2000). The new adapted instrument should retain the item-level characteristics which include internal consistency and the item-to-scale correlations; and scale-level characteristics such as reliability, construct validity and responsiveness. Factor analysis is a commonly used technique. Verification of construct convergent validity is often done for psychological questionnaires (Beaton, Bombardier, Guillemin, & Ferraz, 2000; Van Widenfelt et al., 2005; Peneva, Yordzhev, & Ali, 2013).

5.8.1   Reliability

The acceptable alpha value for Cronbach alpha is ≥.70 and the item-total correlations should exceed a minimum acceptable value of 0.30 (Tylka, Bergeron, & Schwartz, 2005; Hair, Black, Babin, & Anderson, 2010). In this data the Cronhbach alpha value for all the adapted scales is between 0.795 to 0.928 as shown in table Table 5.7. And the drop in the corrected inter-item correlation in most of the items in all the scales is above 0.3. The "Cronbach's Alpha if item deleted" column indicates values, if that specific item is deleted. With an exception of a few items on some scales, most of the values are lower than the aggregated alpha value; i.e., when all the items taken together indicating good internal consistency of the scales.

Deletion of items in the scales measuring nurses' perception about stakeholders' image of a nurse and one item in the emotional intelligence scale which

exhibited unacceptable values has resulted in improved level of overall scale reliability in those specific scales. Also the drops in all the inter-item correlation are above 0.3 and the item if deleted values are all below the overall scale reliability values for all the scales indicating greater stability in the adapted versions of the scales as highlighted in Tables **5.7a– 5.7d.**

Table 5.6 : Reliability values of adapted scales

No.	Scale	No. of Items	Alpha value	No. of Items	Alpha Value
1	Nurses' Perception about Doctors' Image of a Nurse	14	0.795	12	0.826
2	Nurses' Perception about Patients' Image of a Nurse	14	0.812	11	0.833
3	Nurses' Perception about Other Hospital Staffs' Image of a Nurse	14	0.815	12	0.838
4	Nurses' Perceived Image of a Nurse	14	0.835	12	0.851
5	Nurse Practice Environment	26	0.928	-	-
6	Emotional Intelligence	16	0.812	15	0.814
7	Job Satisfaction	20	0. 865	-	-

Table 5.7a : Item – Total Statistics: Nurses' Perception about Doctors' Image of a Nurse (NP-DIN) Scale

	Scale Mean if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	NP-DIN-IPP1 & NP-DIN-IPP4 Deleted Corrected Item-Total Correlation	NP-DIN-IPP1 & NP-DIN-IPP4 Deleted Cronbach's Alpha if Item Deleted
	Item-Total Statistics				
	Scale reliability with 14 items = 0.795				
	Scale reliability after deletion of two items =0.826				
NP-DIN-IPP1	50.2977	**.046**	**.812**	**Deleted**	**Deleted**
NP-DIN-IPP2	49.3818	.380	.785	.378	.821
NP-DIN-IPP3	49.3485	.521	.772	.482	.813
NP-DIN-IPP4	50.0547	**.196**	**.805**	**Deleted**	**Deleted**
NP-DIN-IPP5	49.4406	.384	.785	.395	.820
NP-DIN-IPR1	49.1255	.515	.775	.535	.809
NP-DIN-IPR2	49.2443	.377	.785	.402	.819
NP-DIN-IPR3	49.4473	.545	.770	.544	.807
NP-DIN-IPR4	49.0988	.452	.780	.475	.814
NP-DIN-IPR5	49.3284	.548	.770	.572	.805
NP-DIN-IPA1	49.2737	.538	.772	.549	.807
NP-DIN-IPA2	49.5167	.300	.791	.321	.824
NP-DIN-IPA3	49.2243	.470	.778	.503	.811
NP-DIN-IPA4	49.1335	.582	.767	.595	.803

Table 5.7b : Item – Total Statistics: Nurses' Perception regarding Patients'

Image of a Nurse (NP-PIN) Scale

	Scale Mean if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	**NP-PIN-IPP1, NP-PIN-IPP4 & NP-PIN-IPA2 Deleted** Corrected Item-Total Correlation	**NP-PIN-IPP1, NP-PIN-IPP4& NP-PIN-IPA2 Deleted** Cronbach's Alpha if Item Deleted
		Scale reliability with 14 items = 0.812			
		Scale reliability after deletion of three items =0.833			
NP-PIN-IPP1	48.9466	**.125**	**.824**	**Deleted**	**Deleted**
NP-PIN-IPP2	47.9973	.448	.801	.436	.825
NP-PIN-IPP3	48.1282	.522	.794	.501	.820
NP-PIN-IPP4	48.7009	**.270**	**.815**	**Deleted**	**Deleted**
NP-PIN-IPP5	48.1389	.370	.805	.354	.831
PNP-PIN-IPR1	47.9172	.547	.794	.567	.815
NP-PIN-IPR2	48.1242	.478	.798	.505	.819
NP-PIN-IPR3	48.4286	.505	.795	.523	.819
NP-PIN-IPR4	47.9733	.477	.798	.471	.822
NP-PIN-IPR5	48.1869	.549	.791	.571	.813
NP-PIN-IPA1	48.1375	.594	.788	.609	.810
NP-PIN-IPA2	48.2790	**.254**	**.813**	**Deleted**	**Deleted**
NP-PIN-IPA3	48.0147	.449	.800	.445	.824
NP-PIN-IPA4	47.9680	.570	.790	.593	.,811

Table 5.7c : Item – Total Statistics: Nurses' Perception about Other Hospital Staffs' Image of a Nurse (NP-OHSIN) Scale

	Scale Mean if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	NP-OHSIN-IPP1 & NP-OHSIN-IPP4 Deleted Corrected Item-Total Correlation	NP-OHSIN-IPP1 & NP-OHSIN-IPP4 Deleted Cronbach's Alpha if Item Deleted
Scale reliability with 14 items = 0.815					
Scale reliability after deletion of two items =0.838					
NP-OHSIN-IPP1	49.9346	**.094**	**.830**	**Deleted**	**Deleted**
NP-OHSIN-IPP2	49.0534	.461	.803	.476	.828
NP-OHSIN-IPP3	49.0988	.546	.795	.523	.824
NP-OHSIN-IPP4	49.7583	**.261**	**.819**	**Deleted**	**Deleted**
NP-OHSIN-IPP5	49.2350	.409	.806	.420	.831
NP-OHSIN-IPR1	49.0547	.510	.800	.545	.823
NP-OHSIN-IPR2	49.1629	.487	.800	.497	.826
NP-OHSIN-IPR3	49.4032	.495	.799	.483	.828
NP-OHSIN-IPR4	49.1295	.448	.803	.464	.829
NP-OHSIN-IPR5	49.2083	.604	.790	.607	.817
NP-OHSIN-IPA1	49.2243	.598	.791	.592	.818
NP-OHSIN-IPA2	49.3271	.303	.813	.327	.838
NP-OHSIN-IPA3	49.1375	.463	.802	.497	.826
NP-OHSIN-IPA4	49.0187	.569	.794	.571	.820

Table 5.7d : Item – Total Statistics: Nurses' Perceived Image of a Nurse (NP-IN) Scale

	Scale Mean if Item Deleted	Corrected Item-Total Correla-tion	Cronbach's Alpha if Item Deleted	**NP-IN-IPP1 & NP-IN-IPP4 Deleted** Corrected Item-Total Correlation	**NP-IN-IPP1 & NP-IN-IPP4 Deleted** Cronbach's Alpha if Item Deleted
Scale reliability with 14 items = 0.835 Scale reliability after deletion of two items =0.851				
NP-IN-IPP1	54.9346	**.248**	**.845**	**Deleted**	**Deleted**
NP-IN-IPP2	53.9786	.553	.822	. 561	.839
NP-IN-IPP3	54.0053	.500	.823	.454	.846
NP-IN-IPP4	54.7623	.370	.835	**Deleted**	**Deleted**
NP-IN-IPP5	54.2056	.455	.826	.459	.844
NP-IN-IPR1	53.9146	.553	.822	.578	.838
NP-IN-IPR2	54.0975	.469	.825	.480	.843
NP-IN-IPR3	54.2470	.518	.822	.522	.841
NP-IN-IPR4	54.0147	.545	.821	.569	.837
NP-IN-IPR5	54.1001	.564	.819	.588	.835
NP-IN-IPA1	54.1615	.566	.818	.589	.835
NP-IN-IPA2	54.3258	.419	.828	.420	.847
NP-IN-IPA3	54.0814	.452	.826	.478	.843
NP-IN-IPA4	53.9613	.588	.818	.619	.833

Table 5.8: Item – Total Statistics: Nurse Practice Environment Scale (NPES)

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Scale reliability with 26 items = 0.928				
NPHA1	84.2777	240.150	.417	.927
NPHA2	84.5928	232.782	.639	.924
NPHA3	84.3124	234.081	.605	.924
NPHA4	83.9386	236.488	.602	.924
FNQC1	84.2977	233.348	.656	.923
FNQC2	84.5888	232.892	.565	.925
FNQC3	84.2377	235.751	.640	.924
FNQC4	84.4286	236.398	.543	.925
FNQC5	83.5327	243.517	.511	.926
FNQC6	84.1322	237.778	.527	.925
FNQC7	83.9666	234.599	.650	.923
NMALS1	83.6822	238.490	.576	.925
NMALS2	84.0908	236.879	.564	.925
NMALS3	83.7089	240.388	.543	.925
NMALS4	84.0507	240.364	.461	.926
NMALS5	84.1842	239.257	.483	.926
SRA1	84.8411	230.957	.568	.925
SRA2	84.5007	234.280	.634	.924
SRA3	83.8158	239.148	.577	.925
SRA4	84.5768	238.851	.492	.926
SRA5	84.5007	236.641	.587	.924
SRA6	84.3858	235.842	.565	.925
CNPTR1	83.7971	240.485	.574	.925
CNPTR2	83.7583	238.734	.575	.925
CNPTR3	83.7744	240.589	.532	.925
CNPTR4	83.4433	245.662	.369	.927

Table 5.9 : Item – Total statistics: Emotional Intelligence (EI) Scale

	Scale Mean if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	**Deleting ROE3** Corrected Item-Total Correlation	**Deleting ROE3** Cronbach's Alpha if Item Deleted
**Overall reliability of the scale = 0.812 (16 items).  ** **Reliability after deletion of item ROE3 = 0.814(15 items)**
OEA1	57.1963	.447	.799	.444	.802
OEA2	57.0320	.464	.799	.475	.800
OEA3	57.0868	.299	.809	.312	.811
OEA4	56.9746	.447	.799	.456	.801
ROE1	56.9573	.379	.804	.348	.809
ROE2	56.9119	.469	.799	.466	.801
ROE3	57.1615	**.253**	**.814**	**Deleted**	**Deleted**
ROE4	56.9239	.435	.800	.434	.803
SEA1	57.1308	.409	.802	.414	.804
SEA2	56.8611	.443	.800	.433	.803
SEA3	56.8705	.479	.798	.469	.801
SEA4	56.9786	.477	.798	.481	.800
UOE1	57.4272	.425	.802	.424	.805
UOE2	57.3832	.368	.806	.369	.809
UOE3	57.2150	.440	.800	.458	.801
UOE4	57.1268	.478	.797	.486	.799

Table 5.10 : Item – Total Statistics: Job Satisfaction Scale

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Scale reliability with 20 items = 0.865				
IJS1	67.9119	78.824	.323	.863
IJS2	68.2417	76.339	.419	.860
IJS3	68.2884	74.318	.571	.854
IJS4	67.8411	77.586	.404	.861
IJS5	68.2470	77.686	.356	.862
IJS6	68.2323	74.208	.445	.860
IJS7	67.7290	77.826	.396	.861
IJS8	67.9933	77.680	.425	.860
IJS9	67.8652	76.374	.515	.857
IJS10	68.3084	74.270	.565	.855
IJS11	68.3084	75.075	.519	.856
IJS12	67.9079	76.255	.471	.858
EJS1	68.0601	75.982	.448	.859
EJS2	67.9853	76.250	.459	.859
EJS3	68.4860	74.036	.524	.856
EJS4	68.2323	75.024	.363	.864
EJS5	68.3498	73.570	.562	.854
EJS6	67.9720	74.773	.482	.858
GJS1	68.3712	72.932	.556	.855
GJS2	67.8852	78.030	.379	.861

5.8.2   Factor Analysis of Adapted Version of the Tools

Factor analysis is used to demonstrate the basic goal of obtaining groups of highly inter-correlated variables or measured variables into distinct factors or underlying constructs (Hair, Black, Babin, & Anderson, 2010). Exploratory Factor Analysis (EFA) evaluates the construct validity in the initial phase of an instrument development. Once an initial set of items have been identified, EFA is exercised to inspect the underlying dimensionality in the item set. The extracted factors explain the maximum variance in the scale. Thus, a large set of items can be grouped into meaningful subsets which measure different factors (Worthington & Whittaker, 2006).

Exploratory Factor Analysis was performed with the aim to reduce and group items together so that each factor would represent a consistent content area using sixty percent (451) of the sample. Principal component analysis with promax rotation was used with the aim to retain factors extracted with Eigen values greater than 1. Items communalities confirms the common variance shared by each measured item with other items of the construct on which it loads (Hair, Black, Babin, & Anderson, 2010). In social sciences the acceptable value of item communalities is .4 to .7 (Costello & Osborne, 2005).

Desirable factor loadings of ± .5 and greater indicate a solid factor and are considered practically significant (Costello & Osborne, 2005; Hair, Black, Babin, & Anderson, 2010). However, factor loadings exceeding .30 or .40 are considered as meaningful when the sample size per variable is between 5 and 10 respondents (Floyd & Widaman, 1995).

In social sciences a factor solution accounting for the total variance extracted up to 60 percent or a little less (Hair, Black, Babin, & Anderson, 2010), at least 50 percent is acceptable (Streiner, 1994; Floyd & Widaman, 1995). The suitability of data was assessed for factor analysis through Kaiser-Meyer-Oklin measure of sample adequacy (MSA) value that indicates sample adequacy. Significant Bartlett Test of Sphericity (BTS) indicates sufficiently large correlations among items.

In this study, the exploratory factor analysis results for all the adapted scales indicate items exhibiting communalities above .37 that are retained. The factor loadings of these items are all above 0.5, the total variance explained and the measure of sampling adequacy are within acceptable levels as shown in respective tables 5.11–5.30.

Table 5.11a : Item Communalities: Nurses' Perception about Doctors' Image of Nurse Scale

Communalities			
		Initial	Extraction
NP-DIN-IPP2	Confident	1.000	.420
NP-DIN-IPP5	Competent	1.000	.460
NP-DIN-IPR1	Caring	1.000	.485
NP-DIN-IPR2	Friendly	1.000	.401
NP-DIN-IPR3	Rude	1.000	.605
NP-DIN-IPR5	Uncooperative	1.000	.740
NP-DIN-IPA1	Disorganised	1.000	.681
NP-DIN-IPA2	Logical	1.000	.394
NP-DIN-IPA3	Punctual	1.000	.443
NP-DIN-IPA4	Dishonest	1.000	.686

Extraction Method: Principal Component Analysis.

Table 5.12a : Factor Loadings: Nurses' Perception about Doctors' Image of Nurse Scale

Pattern Matrix[a]

		Component	
		1	2
NP-DIN-IPR5	Uncooperative	.868	
NP-DIN-IPA4	Dishonest	.834	
NP-DIN-IPA1	Disorganised	.825	
NP-DIN-IPR3	Rude	.777	
NP-DIN-IPP5	Competent		.695
NP-DIN-IPP2	Confident		.676
NP-DIN-IPR1	Caring		.666
NP-DIN-IPA2	Logical		.663
NP-DIN-IPA3	Punctual		.594
NP-DIN-IPR2	Friendly		.583

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.[a]
a. Rotation converged in 3 iterations.

Table 5.13a : Total Variance Explained: Nurses' Perception about Doctors' Image of Nurse Scale

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	3.641	36.414	36.414	3.641	36.414	36.414	3.139
2	1.673	16.735	53.148	1.673	16.735	53.148	2.893
3	.845	8.446	61.595				
4	.765	7.654	69.249				
5	.679	6.787	76.036				
6	.635	6.348	82.384				
7	.560	5.601	87.985				
8	.497	4.968	92.953				
9	.383	3.828	96.781				
10	.322	3.219	100.000				

Extraction Method: Principal Component Analysis.
a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Table 5.14a : Factor Correlation: Nurses' Perception about Doctors' Image of Nurse Scale

Component Correlation Matrix		
Component	1	2
1	1.000	.368
2	.368	1.000

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.

Table 5.15a : Sampling Adequacy: Nurses' Perception about Doctors' Image of Nurse Scale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.840
Bartlett's Test of Sphericity	Approx. Chi-Square	1267.904
	Df	45
	Sig.	.000

Table 5.11b : Item Communalities: Nurses' Perception about Patients' Image of Nurse Scale

Communalities		Initial	Extraction
NP-PIN-IPR1	Caring	1.000	.461
NP-PIN-IPR5	Uncooperative	1.000	.715
NP-PIN-IPA1	Disorganised	1.000	.668
NP-PIN-IPA3	Punctual	1.000	.542
NP-PIN-IPA4	Dishonest	1.000	.591
NP-PIN-IPR2	Friendly	1.000	.372
NP-PIN-IPR3	Rude	1.000	.511
NP-PIN-IPP2	Confident	1.000	.544
NP-PIN-IPP5	Competent	1.000	.484

Extraction Method: Principal Component Analysis.

Table 5.12b : Factor Loadings: Nurses' Perception about Patients' Image of Nurse Scale

		Component	
		1	2
NP-PIN-IPR5	Uncooperative	.866	
NP-PIN-IPA1	Disorganised	.838	
NP-PIN-IPR3	Rude	.734	
NP-PIN-IPA4	Dishonest	.709	
NP-PIN-IPP2	Confident		.745
NP-PIN-IPP5	Competent		.730
NP-PIN-IPA3	Punctual		.716
NP-PIN-IPR2	Friendly		.634
NP-PIN-IPR1	Caring		.531

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.[a]
a. Rotation converged in 3 iterations.

Table 5.13b. : Total Variance Explained: Nurses' Perception about Patients' Image of Nurse Scale

Comp onent	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	3.379	37.544	37.544	3.379	37.544	37.544	2.915
2	1.509	16.770	54.314	1.509	16.770	54.314	2.683
3	.847	9.411	63.724				
4	.687	7.628	71.352				
5	.663	7.363	78.715				
6	.591	6.565	85.280				
7	.551	6.119	91.399				
8	.425	4.719	96.118				
9	.349	3.882	100.000				

Extraction Method: Principal Component Analysis.
a.   When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Table 5.14b : Factor Correlation: Nurses' Perception about Patients' Image of Nurse Scale

Component Correlation Matrix		
Component	1	2
1	1.000	.383
2	.383	1.000

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.

Table 5.15b : Sampling Adequacy: Nurses' Perception about Patients' Image of Nurse Scale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.815
Bartlett's Test of Sphericity	Approx. Chi-Square	1050.814
	Df	36
	Sig.	.000

Table 5.11c : Item Communalities: Nurses' Perception about Other Hospital Staffs' Image of Nurse Scale

Communalities		Initial	Extraction
NP-OHSIN-IPP2	Confident	1.000	.508
NP-OHSIN-IPP3	Unintelligent	1.000	.510
NP-OHSIN-IPP5	Competent	1.000	.546
NP-OHSIN-IPR1	Caring	1.000	.555
NP-OHSIN-IPR3	Rude	1.000	.472
NP-OHSIN-IPR5	Uncooperative	1.000	.681
NP-OHSIN-IPA1	Disorganised	1.000	.644
NP-OHSIN-IPR2	Friendly	1.000	.500
NP-OHSIN-IPA3	Punctual	1.000	.404
NP-OHSIN-IPA4	Dishonest	1.000	.594

Extraction Method: Principal Component Analysis.

Table 5.12c. Factor Loadings: Nurses' Perception about Other Hospital Staffs' Image of Nurse Scale

Pattern Matrix[a]

		Component 1	Component 2
NP-OHSIN-IPA1	Disorganised	.826	
NP-OHSIN-IPR5	Uncooperative	.818	
NP-OHSIN-IPA4	Dishonest	.736	
NP-OHSIN-IPR3	Rude	.718	
NP-OHSIN-IPP3	Unintelligent	.691	
NP-OHSIN-IPP5	Competent		.767
NP-OHSIN-IPR2	Friendly		.759
NP-OHSIN-IPR1	Caring		.708
NP-OHSIN-IPP2	Confident		.667
NP-OHSIN-IPA3	Punctual		.560

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.
a.   Rotation converged in 3 iterations.

Table 5.13c : Total Variance Explained: Nurses' Perception about Other Hospital Staffs' Image of Nurse Scale

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	3.827	38.266	38.266	3.827	38.266	38.266	3.363
2	1.587	15.867	54.133	1.587	15.867	54.133	2.931
3	.800	8.004	62.137				
4	.679	6.787	68.924				
5	.635	6.349	75.273				
6	.591	5.907	81.180				
7	.562	5.622	86.802				
8	.500	5.004	91.805				
9	.446	4.458	96.263				
10	.374	3.737	100.000				

Extraction Method: Principal Component Analysis.
a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Table 5.14c : Factor Correlation: Nurses' Perception about Other Hospital Staffs' Image of Nurse Scale

Component Correlation Matrix		
Component	1	2
1	1.000	.402
2	.402	1.000

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.

Table 5.15c : Sampling Adequacy: Nurses' Perception about Other Hospital Staffs' Image of Nurse Scale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.863
Bartlett's Test of Sphericity	Approx. Chi-Square	2118.392
	Df	45
	Sig.	.000

Table 5.11d : Item Communalities: Nurses' Perceived Image of Nurse Scale

Communalities		Initial	Extraction
NP-IN-IPP2	Confident	1.000	.501
NP-IN-IPP3	Unintelligent	1.000	.433
NP-IN-IPP5	Competent	1.000	.496
NP-IN-IPR1	Caring	1.000	.620
NP-IN-IPR2	Friendly	1.000	.390
NP-IN-IPR3	Rude	1.000	.515
NP-IN-IPR4	Responsible	1.000	.507
NP-IN-IPR5	Uncooperative	1.000	.675
NP-IN-IPA1	Disorganised	1.000	.676
NP-IN-IPA2	Logical	1.000	.420
NP-IN-IPA3	Punctual	1.000	.422
NP-IN-IPA4	Dishonest	1.000	.631

Extraction Method: Principal Component Analysis.

Table 5.12d : Factor Loadings: Nurses' Perceived Image of Nurse Scale

Pattern Matrix[a]

		Component	
		1	2
NP-IN-IPR1	Caring	.800	
NP-IN-IPP5	Competent	.751	
NP-IN-IPA2	Logical	.693	
NP-IN-IPP2	Confident	.653	
NP-IN-IPR4	Responsible	.643	
NP-IN-IPA3	Punctual	.637	
NP-IN-IPR2	Friendly	.576	
NP-IN-IPR5	Uncooperative		.840
NP-IN-IPA1	Disorganised		.835
NP-IN-IPA4	Dishonest		.758
NP-IN-IPR3	Rude		.714
NP-IN-IPP3	Unintelligent		.666

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.
a.   Rotation converged in 3 iterations.

Table 5.13d : Total Variance Explained: Nurses' Perceived Image of Nurse Scale

Compo-nent	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	4.658	38.818	38.818	4.658	38.818	38.818	3.966
2	1.627	13.562	52.380	1.627	13.562	52.380	3.753
3	.865	7.205	59.585				
4	.815	6.790	66.376				
5	.649	5.406	71.782				
6	.626	5.221	77.003				
7	.595	4.957	81.960				
8	.532	4.431	86.390				
9	.494	4.119	90.509				
10	.420	3.502	94.011				
11	.381	3.173	97.184				
12	.338	2.816	100.000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Table 5.14d : Factor Correlation: Nurses' Perceived Image of Nurse Scale

Component Correlation Matrix		
Component	1	2
1	1.000	.474
2	.474	1.000

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.

Table 5.15d : Sampling Adequacy: Nurses' Perceived Image of Nurse Scale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.882
Bartlett's Test of Sphericity	Approx. Chi-Square	2971.387
	Df	66
	Sig.	.000

Table 5.16 : Item Communalities: Nurse Practice Environment Scale

	Communalities	Initial	Extraction
NPHA2	The administration listens and responds to staff on daily problems and procedures	1.000	.594
NPHA3	The matron is equal in power and authority to other top level hospital executives	1.000	.467
FNQC1	There is quality assurance program which helps in maintaining and improving quality of nursing care	1.000	.547
FNQC2	There is orientation program for newly hired nurses	1.000	.451
FNQC3	There is a clear philosophy of nursing that permeates the patient care environment	1.000	.530
FNQC4	There are in-service/continuing education programs for nurses	1.000	.487
FNQC5	I have opportunity to work with nurses who are clinically competent	1.000	.477
FNQC7	There is clear description of nurses roles and responsibilities	1.000	.492
NMALS1	The head nurse has good managerial and leadership ability	1.000	.588
NMALS3	A head nurse is supportive of the nurses	1.000	.639
SRA1	There are sufficient registered nurses to provide quality patient care	1.000	.443
SRA2	There is sufficient time and opportunity to discuss patient care problems.	1.000	.527
SRA5	There is adequate time to consult other professionals if necessary	1.000	.440
CNPTR1	Physicians and nurses have good team relationships	1.000	.501
CNPTR2	There is a lot of teamwork between nurses and doctors	1.000	.490
NMALS2	The head nurse backs up the nursing staff in decision making, even if the conflict is with the physician.	1.000	.487

Extraction Method: Principal Component Analysis.

Table 5.17 : Factor Loadings: Nurse Practice Environment Scale

Pattern Matrix[a]

		Component	
		1	2
NPHA2	The administration listens and responds to staff on daily problems and procedures	.830	
FNQC4	There are in-service/continuing education programs for nurses	.761	
FNQC2	There is orientation program for newly hired nurses	.710	
SRA1	There are sufficient registered nurses to provide quality patient care	.708	
SRA2	There is sufficient time and opportunity to discuss patient care problems.	.690	
FNQC1	There is quality assurance program which helps in maintaining and improving quality of nursing care	.685	
FNQC3	There is a clear philosophy of nursing that permeates the patient care environment	.675	
NPHA3	The matron is equal in power and authority to other top level hospital executives	.595	
SRA5	There is adequate time to consult other professionals if necessary	.582	
FNQC7	There is clear description of nurses roles and responsibilities	.564	
NMALS3	A head nurse is supportive of the nurses		.881
NMALS1	The head nurse has good managerial and leadership ability		.793
CNPTR1	Physicians and nurses have good team relationships		.694
FNQC5	I have opportunity to work with nurses who are clinically competent		.687
CNPTR2	There is a lot of teamwork between nurses and doctors		.645
NMALS2	The head nurse backs up the nursing staff in decision making, even if the conflict is with the physician.		.557

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.[a]
a. Rotation converged in 3 iterations.

Table 5.18 : Total Variance Explained: Nurse Practice Environment Scale

Total Variance Explained

Compo-nent	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	6.748	42.177	42.177	6.748	42.177	42.177	6.153
2	1.412	8.822	50.999	1.412	8.822	50.999	5.182
3	.981	6.130	57.129				
4	.837	5.228	62.358				
5	.744	4.650	67.008				
6	.689	4.305	71.313				
7	.614	3.840	75.153				
8	.577	3.604	78.757				
9	.528	3.297	82.054				
10	.488	3.052	85.106				
11	.464	2.902	88.008				
12	.441	2.755	90.762				
13	.414	2.588	93.350				
14	.369	2.307	95.657				
15	.360	2.248	97.905				
16	.335	2.095	100.000				

Extraction Method: Principal Component Analysis.
a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Table 5.19 : Factor Correlation: Nurse Practice Environment Scale

Component Correlation Matrix

Component	1	2
1	1.000	.611
2	.611	1.000

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.

Table 5.20 : Sampling Adequacy: Nurse Practice Environment Scale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.928
Bartlett's Test of Sphericity	Approx. Chi-Square	2923.479
	Df	120
	Sig.	.000

Table 5.21 : Item Communalities: Emotional Intelligence Scale

Communalities		Initial	Extraction
OEA1	I always know my others' emotions from their behavior.	1.000	.439
OEA2	I am a good observer of others' emotions.	1.000	.638
OEA4	I have good understanding of the emotions of people around me.	1.000	.543
ROE1	I am able to control my temper and handle difficulties rationally.	1.000	.562
ROE3	I can always calm down quickly when I am very angry.	1.000	.433
SEA2	I have good understanding of my own emotions	1.000	.420
SEA3	I really understand what I feel.	1.000	.487
SEA4	I always know whether or not I am happy	1.000	.418
UOE1	I always use my emotions to sets goals for myself	1.000	.639
UOE2	I always use my emotions to tell myself that I am a competent person.	1.000	.621
UOE4	I always use my emotions to encourage myself to perform well.	1.000	.446
UOE3	I use my emotions to be a self-motivated person	1.000	.522

Extraction Method: Principal Component Analysis.

Table 5.22 : Factor Loadings: Emotional Intelligence Scale

Pattern Matrix[a]

		Component		
		1	2	3
UOE2	I always use my emotions to tell myself that I am a competent person.	.817		
UOE1	I always use my emotions to sets goals for myself	.786		
UOE3	I use my emotions to be a self-motivated person	.682		
UOE4	I always use my emotions to encourage myself to perform well.	.608		
OEA2	I am a good observer of others' emotions.		.828	
OEA4	I have good understanding of the emotions of people around me.		.734	
OEA1	I always know my others' emotions from their behavior.		.641	
SEA4	I always know whether or not I am happy		.518	
ROE1	I am able to control my temper and handle difficulties rationally.			.741
ROE3	I can always calm down quickly when I am very angry.			.692
SEA3	I really understand what I feel.			.639
SEA2	I have good understanding of my own emotions			.569

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.[a]
a. Rotation converged in 5 iterations.

Table 5.23 : Total Variance Explained: Emotional Intelligence Scale

							Rotation Sums of Squared Loadings[a]
	Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings			
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	3.252	27.103	27.103	3.252	27.103	27.103	2.457
2	1.652	13.771	40.874	1.652	13.771	40.874	2.481
3	1.263	10.529	51.403	1.263	10.529	51.403	2.233
4	.894	7.454	58.857				
5	.850	7.085	65.942				
6	.758	6.314	72.257				
7	.654	5.452	77.709				
8	.633	5.273	82.982				
9	.587	4.894	87.876				
10	.567	4.727	92.602				
11	.466	3.881	96.484				
12	.422	3.516	100.000				

Extraction Method: Principal Component Analysis.
a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Table 5.24 : Factor Correlation: Emotional Intelligence Scale

Component Correlation Matrix			
Component	1	2	3
1	1.000	.280	.202
2	.280	1.000	.334
3	.202	.334	1.000

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.

Table 5.25 : Sampling Adequacy: Emotional Intelligence Scale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.776
Bartlett's Test of Sphericity	Approx. Chi-Square	998.867
	Df	66
	Sig.	.000

Table 5.26 : Item Communalities: Job Satisfaction Scale

Communalities		Initial	Extraction
EJS5	The chances for advancement on this job.	1.000	.585
IJS3	The chance to do different things from time to time.	1.000	.625
IJS10	The freedom to use your own judgment	1.000	.630
IJS11	The chance to try your own methods of doing the job	1.000	.500
IJS7	The chance to do things for other people.	1.000	.670
EJS6	The praise you get for doing a good job.	1.000	.510
IJS4	The chance to be somebody in the community	1.000	.393
IJS8	The chance to tell people what to do.	1.000	.377
IJS9	The chance to do something that makes use of your abilities.	1.000	.455
EJS4	Your pay and the amount of work you do.	1.000	.621
IJS6	The way your job provides for steady employment.	1.000	.561
IJS5	Being able to do things that don't go against your conscience.	1.000	.415

Extraction Method: Principal Component Analysis.

Table 5.27 : Factor Loadings: Job Satisfaction Scale

Pattern Matrix[a]

		Component		
		1	2	3
IJS10	The freedom to use your own judgment	.815		
IJS3	The chance to do different things from time to time.	.777		
EJS5	The chances for advancement on this job.	.776		
IJS11	The chance to try your own methods of doing the job	.675		
IJS7	The chance to do things for other people.		.885	
EJS6	The praise you get for doing a good job.		.681	
IJS4	The chance to be somebody in the community		.623	
IJS9	The chance to do something that makes use of your abilities.		.541	
IJS8	The chance to tell people what to do.		.521	
EJS4	Your pay and the amount of work you do.			.815
IJS6	The way your job provides for steady employment.			.729
IJS5	Being able to do things that don't go against your conscience.			.631

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.
a.   Rotation converged in 5 iterations.

Table 5.28 : Total Variance Explained: Job Satisfaction Scale

Compo-nent	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	3.924	32.699	32.699	3.924	32.699	32.699	3.191
2	1.287	10.728	43.427	1.287	10.728	43.427	2.977
3	1.129	9.410	52.836	1.129	9.410	52.836	2.285
4	.864	7.200	60.036				
5	.803	6.690	66.726				
6	.695	5.792	72.519				
7	.627	5.228	77.747				
8	.608	5.065	82.812				
9	.581	4.840	87.652				
10	.536	4.468	92.119				
11	.506	4.220	96.340				
12	.439	3.660	100.000				

Extraction Method: Principal Component Analysis.
a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Table 5.29 : Factor Correlation: Job Satisfaction Scale

Component Correlation Matrix			
Component	1	2	3
1	1.000	.475	.395
2	.475	1.000	.310
3	.395	.310	1.000

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.

Table 5.30 : Sampling Adequacy: Job Satisfaction Scale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.861
Bartlett's Test of Sphericity	Approx. Chi-Square	1948.892
	Df	66
	Sig.	.000

5.8.3   Social Desirability Response Bias

There have been criticisms regarding the use of self report measures related to attitude, behaviour and feelings because respondents tend to provide favourable representative answers. Pressure of social desirability, the perceived value of projecting an image which represents socially approved behavior is a major element of self presentation (Nunnally, 1978; cited by Hays et al., 1989).

"Socially desirable responding (SDR) is typically defined as the tendency to give positive self-descriptions" (Paulhus, 2002). It is the propensity of individuals to disagree with socially unattractive traits and behaviors and admit the socially desirable ones (Zerbe & Paulhus, 1987).

A variety of reasons pose questions about the validity of the causal conclusions and the confidence on self-report measurements of both dependent and independent constructs. Some of such contexts are systematic response distortions, mono-method bias, common method variance and the psychometric properties of scales (Hays et al., 1989). Social desirable response set (SDRS) is a potential useful control variable in multivariate analysis. A short SDRS measure can be used as a practical alternative to reduce the burden of lengthy instruments (Hays et al., 1989).

Randall & Fernandes (1991) found self-reported ethical conduct as more closely associated with cognisant under-reporting of undesirable behaviors and over-reporting of desirable behaviours. However, Crutzen & Göritz (2010) identified that self-reported health risk behaviors were not associated with social desirability bias. Self reported measures could be vulnerable to socially desirable responding. Hence, the short SDRS measure consisting of five items (SDRS-5, Hays et al., 1989) was incorporated in the adapted emotional intelligence scale to combat the issue of social desirable responding. There was no correlation between the dimensions (OEA and

ROE), but a negative correlation was found with dimension UOE (r=152; 0.01) of emotional intelligence among nurses and the SDR which is presented in Table 5.15.

Table 5.31 : Correlation between Social Desirability Responding and dimensions of Emotional Intelligence

		SDR_749	UOE	OEA	ROE
		Correlations			
SDR_749	Pearson Correlation	1	-.152**	-.052	.006
	Sig. (2-tailed)		.000	.154	.863
	N	749	749	749	749
UOE	Pearson Correlation	-.152**	1	.335**	.274**
	Sig. (2-tailed)	.000		.000	.000
	N	749	749	749	749
OEA	Pearson Correlation	-.052	.335**	1	.415**
	Sig. (2-tailed)	.154	.000		.000
	N	749	749	749	749
ROE	Pearson Correlation	.006	.274**	.415**	1
	Sig. (2-tailed)	.863	.000	.000	
	N	749	749	749	749

**. Correlation is significant at the 0.01 level (2-tailed).

5.8.4 Labeling the dimensions of the adapted scales

A. Nurses' Perception about Stakeholders' Image of a Nurse (NP-SIN)

Variables with higher loadings on a particular factor are considered as more significant and more representative of the factor. Hence the factor is labelled with reference to the variable with higher factor loading (Hair, Black, Babin, & Anderson, 2010). In this study also, the factors are labelled considering the higher factor loadings. In the scales measuring, "Nurses' Perception about Stakeholders' View of a Nurse", **Factor I** is labelled as "**Inter-Personal Relation**" because items IPR5 and IPR3 also have comparatively higher factor loadings. **Factor II**, is labelled as "**Inter-Personal Power**" because two of the items IPP5 and IPP2 indicate higher factor loadings consistently in all four versions.

a. Nurses' Perception about Doctors' Image of Nurse (NP-DIN)

		Dimensions and items	
I.		**Inter-Personal Relation (Doc_IPR)**	
1	NP-DIN-IPR5		Uncooperative
2	NP-DIN-IPA4		Dishonest
3	NP-DIN-IPA1		Disorganised
4	NP-DIN-IPR3		Rude
II.		**Inter-Personal Power (Doc_IPP)**	
1	NP-DIN-IPP5		Competent
2	NP-DIN-IPP2		Confident
3	NP-DIN-IPR1		Caring
4	NP-DIN-IPA2		Logical
5	NP-DIN-IPA3		Punctual
6	NP-DIN-IPR2		Friendly

b. Nurses' Perception about Patients' Image of Nurse (NP-PIN)

		Dimensions and items	
I		**Inter-Personal Relation (Pat_IPR)**	
1	NP-PIN-IPR5		Uncooperative
2	NP-PIN-IPA1		Disorganised
3	NP-PIN-IPR3		Rude
4	NP-PIN-IPA4		Dishonest
II		**Inter-Personal Power (Pat_IPP)**	
1	NP-PIN-IPP2		Confident
2	NP-PIN-IPP5		Competent
3	NP-PIN-IPA3		Punctual
4	NP-PIN-IPR2		Friendly
5	NP-PIN-IPR1		Caring

c. Nurses' Perception about Other Hospital Staffs' Image of Nurse (NP-OHSIN)

	Dimensions and items	
I	**Inter-Personal Relation (OHS_IPR)**	
1	NP-OHSIN-IPA1	Disorganised
2	NP-OHSIN-IPR5	Uncooperative
3	NP-OHSIN-IPA4	Dishonest
4	NP-OHSIN-IPR3	Rude
5	NP-OHSIN-IPP3	Unintelligent
II	**Inter-Personal Power (OHS_IPP)**	
1	NP-OHSIN-IPP5	Competent
2	NP-OHSIN-IPR2	Friendly
3	NP-OHSIN-IPR1	Caring
4	NP-OHSIN-IPP2	Confident
5	NP-OHSIN-IPA3	Punctual

d. Nurses' Perceived Image of Nurse (NP-IN)

Dimensions and items		
I	**Inter-Personal Relation (SV_IPR)**	
1	NP-IN-IPR5	Uncooperative
2	NP-IN-IPA1	Disorganised
3	NP-IN-IPA4	Dishonest
4	NP-IN-IPR3	Rude
5	NP-IN-IPP3	Unintelligent
II	**Inter-Personal Power (SV_IPP)**	
1	NP-IN-IPR1	Caring
2	NP-IN-IPP5	Competent
3	NP-IN-IPA2	Logical
4	NP-IN-IPP2	Confident
5	NP-IN-IPR4	Responsible
6	NP-IN-IPA3	Punctual
7	NP-IN-IPR2	Friendly

B. Nurse Practice Environment

In the scale "Nurse Practice Environment", **Factor I** includes three items with higher factor loadings from the dimension, "**Nurse Manager Ability, Leadership, and Support of Nurses". Factor II** includes more items (FNQC1, FNQC 2, FNQC 3, FNQC 4, FNQC 7) from the dimension "**Foundations for Nursing Quality of Care".** Also FNQC 4 and FNQC2 have higher factor loading, hence the label of the dimension is retained for the second factor.

		Dimensions and items
I		**"Nurse Manager Ability, Leadership, and Support of Nurses" (NMALSN)**
1	NMALS3	A head nurse is supportive of the nurses
2	NMALS1	The head nurse has good managerial and leadership ability
3	CNPTR1	Physicians and nurses have good team relationships
4	FNQC5	I have opportunity to work with nurses who are clinically competent
5	CNPTR2	There is a lot of teamwork between nurses and doctors
6	NMALS2	The head nurse backs up the nursing staff in decision making, even if the conflict is with the physician.
II		**"Foundations for Nursing Quality of Care" (FNQC)**
1	NPHA2	The administration listens and responds to staff on daily problems and procedures
2	FNQC4	There are in-service/continuing education programs for nurses
3	FNQC2	There is orientation program for newly hired nurses
4	SRA1	There are sufficient registered nurses to provide quality patient care
5	SRA2	There is sufficient time and opportunity to discuss patient care problems.
6	FNQC1	There is quality assurance program which helps in maintaining and improving quality of nursing care
7	FNQC3	There is a clear philosophy of nursing that permeates the patient care environment
8	NPHA3	The matron is equal in power and authority to other top level hospital executives
9	SRA5	There is adequate time to consult other professionals if necessary
10	FNQC7	There is clear description of nurses roles and responsibilities

C. Emotional Intelligence Scale

In the scale, "Emotional Intelligence", **Factor I** includes all the four items as in the original scale, hence the original label, **"Use of Emotion"** is retained. **Factor II** is labelled as **"Others Emotion Appraisal",** as items **OEA1, OEA2, and OEA4** having higher factor loadings are from the original dimension. Similarly **factor III** is labelled as **"Regulation of Emotion"** it includes items ROE1 and ROE3 which have higher factor loadings.

		Dimension and Items
I		**Use of Emotion (UOE)**
1	UOE2	I always use my emotions to tell myself that I am a competent person.
2	UOE1	I always use my emotions to sets goals for myself
3	UOE3	I use my emotions to be a self-motivated person
4	UOE4	I always use my emotions to encourage myself to perform well.
II		**Others Emotion Appraisal (OEA)**
1	OEA2	I am a good observer of others' emotions.
2	OEA4	I have good understanding of the emotions of people around me.
3	OEA1	I always know my others' emotions from their behavior.
4	SEA4	I always know whether or not I am happy
III		**Regulation of Emotion (ROE)**
1	ROE1	I am able to control my temper and handle difficulties rationally.
2	ROE3	I can always calm down quickly when I am very angry.
3	SEA3	I really understand what I feel.
4	SEA2	I have good understanding of my own emotions

D. Job satisfaction Scale

In Job satisfaction, Factor I is labelled as **"Freedom on the Job",** since most of the items in this factor indicate freedom and chance to work out different things, new methods, as well as provide chance for advancement. **Factor II** is labelled as **"Social Service"** as most of the items indicate servie to others. **factor III**, includes pay and job security with higher factor loadings, hence labelled as **"Job Security".**

		Dimension and Items
I		**"Freedom on the Job" (F_Job)**
1	IJS10	The freedom to use your own judgment
2	IJS3	The chance to do different things from time to time.
3	EJS5	The chances for advancement on this job.
4	IJS11	The chance to try your own methods of doing the job
II		**Social Service (Soc_Serv)**
1	IJS7	The chance to do things for other people.
2	EJS6	The praise you get for doing a good job.
3	IJS4	The chance to be somebody in the community
4	IJS9	The chance to do something that makes use of your abilities.
5	IJS8	The chance to tell people what to do.
III		**Job Security (J_Sec)**
1	EJS4	Your pay and the amount of work you do.
2	IJS6	The way your job provides for steady employment.
3	IJS5	Being able to do things that don't go against your conscience.

The entire scale adaptation process is explicitly described in this chapter. These instruments would support gathering data regarding the constructs in different clinical settings. In this study they are used to collect data from the registered nurses who are the main respondents in the study.

CHAPTER 6
SCALE DEVELOPMENT

Scales are a materialization of latent constructs. They are designed to measure attitudes, behaviors and hypothetical scenarios which cannot be measured directly, however, are expected to exist as outcomes of our theoretical comprehension of the world. Scales capture latent concepts that are not directly observable, through a group of concrete statements. These are characteristically used to measure constructs which cannot be captured as a single variable. The use of numerous variables to capture a fundamental latent construct can furthermore account for and overcome item-specific measurement error, thereby resulting in more accurate findings (Boateng et al., 2018; Carpenter, 2018). Thus scale development results in valid and reliable measures contributing to the authenticity and advancement of a research field (Slavec & Drnovšek, 2012; Carpenter, 2018).

This chapter deals with the details of scale development which is subsequently used to capture the professional behaviour among nurses in varied clinical settings. The process followed in the development of the Nurse Professionalism Scale **(NPS)** is based on the steps discussed by Slavec & Drnovšek (2012), Boateng et al., (2018) and Carpenter (2018).

6.1 PHASE 1: THEORETICAL IMPORTANCE AND EXISTENCE OF THE CONSTRUCT (ITEM DEVELOPMENT)

6.1.1 Content Domain Specification.

"**Professionalism** is the set of attitudes and behaviours that are believed to be appropriate to a particular occupation" (Hammer, 2000). Professionalism, a multidimensional concept that includes individual, inter-personal and societal dimensions (Al-Sudani, Al-Abbas, Al-Bannawi, & Al-Ramadhan, 2013). It is also described as "the conceptualization of attributes, interactions, obligations, attitudes and behaviors required of professionals in relation to clients and society as a whole" (Fantahun et al., 2014). It refers to "the conduct, goals or qualities that define a professional or a profession" (Karadağ, Hisar, & Elbas, 2007) and is coupled with

quality nursing practice (Evans, 2008). Health-care providers exhibit professionalism through knowledge, attitude and behaviour that reflect the principles, policies and standards mandatory towards successful professional practice (Tanaka, Yonemitsu, & Kawamoto, 2014). Evans (2008) describes it as the attitudes and behavior one possesses toward one's profession. Dikmen, Karataş, Arslan, & Bedriye (2016) stated that "professionalism is the degree of dedication exhibited by professionals concerning the values and behavioral traits of a definite career identity". Hammer (2000) defined it as the active demonstration of the traits by a professional and further state that professionalism is displayed in the way pharmacists conduct themselves in professional situations. Twigg (1990) defined professionalism as qualities or typical features of a profession or professionals.

Professionalism is a comprehensive concept that offers opportunities for nurses' personal and professional growth (Alidina, 2013). This key trait is the relationship involving the nurse and the patient. Nursing professionalism mirrors the approach in which nurses evaluate their work and thus ensure safe quality care (Dikmen, Karataş, Arslan, & Bedriye, 2016; Alidina, 2013). Adams, Miller & Beck (1996) stated that nursing professionalism necessitates nurses to demonstrate definite behaviours illustrating beliefs of the profession in terms of knowledge, attitudes and skills signifying professional identity and commitment to the profession. These features are consistent with the characteristics sketched in the "Registered Nurses Association of Ontario Best Practice Guideline (RNAO-BPG)," 'Professionalism in Nursing' (RNAO, 2007), and "Miller's model" the 'Wheel of Professionalism in Nursing' (Miller, 1984).

6.1.2 Item Pool Generation

Several researchers have developed instruments to explore and evaluate professionalism among nurses. Miller's Model or the 'Wheel of Professionalism in Nursing' (1984) was an extension of Hall and Friedson's works (1970). Miller used "The Social Policy Statement (1980), Code for Nurses with Interpretative Statements (1976), and recommendations and policies from the American Nurses Association (ANA)" as a basis for the behavior represented in the Wheel of Professionalism in Nursing (Miller, 1984). This instrument was developed to serve as a guide for every nurse in monitoring their professional behavior. Subsequently, Miller, Adams & Beck

(1993) developed an evaluative "Behavioral Inventory Form for Professionalism in Nursing" (BIPN) based on the Model which is widely used to evaluate professionalism among nurses (Çelik & Hisar, 2012; Cerit & Dinc, 2012; Dikmen, Karataş, Arslan, & Bedriye, 2016; Yang, Li, & Li, 2016; Tanaka, Taketomi, Yonemitsu, & Kawamoto, 2015; Konukbay et al., 2014; Karadag , Hisar & Elbas, 2007).

Several other researchers explored professionalism among nurses using RNAO-BPG (2007) questionnaire, an adaptation of Registered Nurses Association, Ontario Best Practice Guidelines (RNAO-BPG) (Solomon, Beker, Belachew, 2015; Fantahun et al., 2014), and "Hall's Professionalism Inventory" (HPI) scale (Cohen & Kol, 2004; Hassandoost, Moghadas, Momeni, & Rafiei, 2016). "The Professionalism and Environmental Factors in the Workplace Questionnaire, (PEFWQ)", was developed based on literature, code of ethics and jurisdictional practice standards. This instrument was neither designed to measure personal professionalism nor as a diagnostic benchmarking tool but rather was used in identifying areas of alarm to nurses and as an opening point for discussion (Baumann & Kolotylo, 2009).

Professional Code of Conduct and Ethics is viewed as a professional legitimacy for considering nursing as a profession and an essential tool that facilitates nurse practise while handling ethical challenges (Biton & Tabak, 2003; Balang & Burton, 2014). RNAO-BPG and Wheel of Professionalism in Nursing' by Miller, serve as directives to the adherence to code of nurses which define values and beliefs in nursing profession. Every practising nurse is expected to share the responsibility of self-regulation and practise in accordance with the professional standards and code of ethics for registered nurses (CNA, 2008; Balang & Burton, 2014).

Nurses are persistently confronted with complex issues in their practice. The Code serves as the fundamental guidance for nurses as well as for many other professions (Zahedi et al., 2013). Relevant literature review on the construct professionalism across other professions revealed that most researchers have described, adopted, adapted or developed instruments based on the professional code of conduct and ethics. Physician Charter on Medical Professionalism is a product of American Board of Internal Medicine Foundation (ABIM), the American College of Physicians Foundation, and the European Federation of Internal Medicine. This

popular document highlights the essential principles and responsibilities fundamental to professionalism in medicine (Swick, 2000; Chisholm et al., 2006; Brinkman et. al. 2007a; Green, Zick, & Makoul, 2009; Mueller, 2009; Lombarts et al., 2014; San-Martí, Delgado-Bolton, & Vivanco, 2017). Some others have used standards from the "Accreditation Council on Graduate Medical Education" (ACGME) (Al-Eraky & Chandretilake, 2012; Al-Sudani, Al-Abbas, Al-Bannawi, & Al-Ramadhan, 2013). The "Code of Ethics for Pharmacists and the American Association of Colleges of Pharmacy" (AACP) and "The American Council on Pharmaceutical Education (ACPE) Accreditation Standards" describing the attitudinal and behavioural components have been considered in the context of providing pharmaceutical care (Hammer, 2000). "The College of Medical Laboratory Technologists of Ontario's (CMLTO) Code of Ethics and Standards of practice" serve as the foundation of MLT's professionalism (Miniggio, 2015). Pollard (1995) explored ethical performance contributing to authority, control and social responsibility which are considered as the hallmark of professionalism among news workers. American Bar association (ABA) and the judicial statements on professionalism serve as the basis for evaluating professionalism in the area of law (Irvin, 2012).

Although the authentic international code exists for nurses, the national code provides additional assistance in clinical settings while managing the complex roles in patient care, research, education and management of certain areas of health care system within the country. It serves as a culturally-adapted guidance which helps nurses in decisions making more closely (Zahedi et al., 2013). Following review of literature, the national "Code of Professional Conduct for Nurses in India", framed by the Indian Nursing Council (CPCNI-INC), (**Appendix D**) consisting of 38 items and six dimensions, was identified as a comprehensive measure to capture professionalism among nurses. The Code serves the interests and needs of the profession efficiently, as it illustrates individual nurse's professional responsibility and accountability, nursing practice, communication and interpersonal relationships, valuing human being, management, professional advancement. The code outlines the elements required for nurses' behavior and empowers them in making perfect decisions as clinical nurses, administrators, researchers and policy-makers. It reminds the nurses about the valuable status of nursing profession and their attempts mandatory towards

upholding the values as professionals while providing direct care to clients, teaching students, conducting research, supervision and management.

6.1.3   Content Validity

Face validity through expert review

Face validity supports content validity and is used to verify whether the intended instrument appears to relate to the construct under study (Yaghmaie, 2003). The face validity of CPCNI-INC was reviewed by four nursing teaching faculty, four senior clinical nurses and three faculty from management for readability, comprehensiveness, redundancy and appropriateness of the items (**Appendix F**). Based on the feedback, the items were retained under the original dimensions. However, majority items were re-worded and or reframed in simpler vocabulary without changing the meaning as shown in Table 6.1. This process was completed in three rounds by resubmitting to and discussing the changes with the same experts. Since it was the national professional code of conduct, no items were deleted at this stage.

Table 6.1 : Reframed items: Code of Professional Conduct for Nurses in India

No.	Dimensions	Reframed items
	Professional Responsibility and Accountability	
1	Appreciates sense of self-worth and nurtures it.	I have a sense of self-worth of being a professional nurse and nurture it.
2	Maintains standards of personal conduct reflecting credit upon the profession	I maintain standards of conduct/practice which add to the respect/status of the profession
3	Carries out responsibilities within the framework of the professional boundaries.	I carry out nursing responsibilities within the framework of professional boundaries.
4	Is accountable for maintaining practice standards set by Indian Nursing Council.	I take accountability for maintaining practice standards set by Indian Nursing Council.
5	Is accountable for own decisions and actions.	I take accountability for my professional decisions and actions.
6	Is compassionate.	I am compassionate while performing nursing care activities
7	Is responsible for continuous improvement of current practices.	I take responsibility for continuous improvement of current nursing care practice.

8	Provides adequate information to individuals that allow them informed choices.	I provide adequate information to patients and significant others that allows them to make informed choices.
9	Practices healthful behaviour	I practice healthy behaviour
II	**Nursing Practice**	
10	Provides care in accordance with set standards of practice	I provide care in accordance with set standards of practice.
11	Treats all individuals and families with human dignity in providing physical, psychological, emotional, social and spiritual aspects of care.	I treat patients and their significant others with human dignity while providing holistic nursing care.
12	Respects individuals and families in the context of traditional and cultural practices, promoting healthy practices and discouraging harmful practices.	I respect the traditional and cultural practices of patients and their significant others while promoting healthy practices and discouraging harmful practices.
13	Presents realistic picture truthfully in all situations for facilitating autonomous decision-making by individuals and families.	I present realistic and truthful picture in all situations for facilitating autonomous decision-making by patients and their significant others.
14	Promotes participation of individuals and significant others in the care.	I promote participation of patients and their significant others in the care
15	Ensures safe practice	I ensure safe practice of care for self and patients.
16	Consults, coordinates, collaborates and follows up appropriately when individuals' care needs exceed the nurse's competence.	I consult with team members and follow up appropriately when patients care needs exceed my competence.
III	**Communication and Interpersonal Relationships**	
17	Establishes and maintains effective interpersonal relationships with individuals families and communities.	I establish and maintain effective interpersonal relationships with patients and their significant others.
18	Upholds the dignity of team members and maintains effective interpersonal relationship with them.	I respect the team members and maintain effective interpersonal relationship with them.
19	Appreciates and nurture professional role of team members.	I acknowledge the professional role of team members
20	Cooperates with other health professional to meet the needs of	I cooperate with other health professional to meet the needs of the

	the individuals, families and communities.	patients and their significant others.
IV		**Valuing Human Being**
21	Takes appropriate action to protect individuals from harmful unethical practice.	I take appropriate action to protect patients from harmful and unethical practice.
22	Considers relevant facts while taking conscious decisions in the best interest of individuals	I consider relevant facts while taking decisions in the best interest of patients.
23	Encourages and supports individuals in their right to speak for themselves on issues affecting their health and welfare.	I encourage and support patients in their right to speak for themselves on issues affecting their health and welfare.
24	Respects and supports choices made by individuals	I respect and support choices made by patients.
V		**Management**
25	Ensures appropriate allocation and utilization of available resources.	I ensure appropriate allocation and utilization of available resources.
26	Participates in supervision and education of students and other formal care providers.	I participate in supervision and education of students and other care providers.
27	Uses judgment in relation to individual competence while accepting and delegating responsibility.	I use judgment in relation to individual competence while delegating responsibility to colleagues, patients, relatives
28	Facilitates conducive work culture in order to achieve institutional objectives.	I facilitate conducive work culture in order to achieve patient care objectives
28	Communicates effectively following appropriate channels of communication	I communicate effectively with superiors, team members and subordinates
30	Participates in performance appraisal	I participate in the performance appraisal of self and others.
31	Participates in evaluation of nursing services.	I participate in the evaluation of nursing services
32	Participates in policy decisions, following the principle of equity and accessibility of services.	I participate in policy decisions related to patient care services
33	Works with individuals to identify their needs and sensitizes policy makers and funding agencies for resource allocation	I work with patients to identify their needs and sensitizes policy makers and funding agencies for resource allocation

VI	Professional Advancement	
34	Ensures the protection of the human rights while pursuing the advancement of knowledge	I ensure the protection of the human rights while pursuing the advancement of knowledge.
35	Contributes to the development of nursing practice.	I contribute to the development of nursing practice.
36	Participates in determining and implementing quality care.	I participate in determining and implementing quality care.
37	Takes responsibility for updating own knowledge and competencies.	I take responsibility for updating my own knowledge and competencies.
38	Contributes to core of professional knowledge by conducting and participating in research	I contribute to core of professional knowledge by conducting and participating in research.

Content Validity

Content validity is a fundamental step in the development of a new instrument wherein the judgement –quantification process is carried out which facilitates the revision of items on the basis of experts' feedback (Zamanzadeh et al., 2015). "A measure has content validity when its items accurately represent the thing being measured" (Baumann & Kolotylo, 2009). The tool was sent for content validation to the experts from the field of nursing and health care management. Initially the tool was sent to 23 experts: 16 Ph. D. in Nursing and 7 Ph. D. in Health care management faculty. The experts were requested to validate the tools on relevance and clarity with a 4-point rating scale. Score of one and two was considered as zero and score of three and four was considered as one during calculation of items as well as scale content validity indices. Fifteen experts provided valid responses, comments and suggestions and six experts gave suggestions and comments. The calculated I-CVI was above 0.87and D-CVI and S-CVI was above 0.9. However, some experts suggested reframing of items. Changes were incorporated and the tool was resent for validation to 15 experts from among the initial pool of experts. Five experts from the field of nursing and three from health care management validated the tool and provided their valuable comments and suggestions. The calculated I-CVI, D-CVI and S-CVI were found to be above 0.9   **(Appendix-H).**

Ethical considerations

Approval was obtained from the ethical review committee. Informed consent was obtained from the respondents after explaining the purpose, benefits, risks and anonymity and confidentiality assurance.

6.2 PHASE 2: REPRESENTATION AND APPROPRIATENESS OF DATA COLLECTION (SCALE DEVELOPMENT)

6.2.1 Questionnaire Development

It was decided to use the CPCNI-INC as a "Nurse Professionalism Scale" **(NPS*)** on six point likert scale with ratings from 1=never to 5=always. Provision was made to respond on items which are not applicable as "NA".

Pre-testing

Field testing or pre-testing a research tool is an essential element of instrument construction. The pre-test of an instrument should be carried out on a similar but not the sample population as the population which you are proposing to study (Kothari, 2004).

"Pre-testing helps to ensure that items are meaningful to the target population before the survey is actually administered" (Boateng et al., 2018). The tool was administered on conveniently selected 15 clinical nurses working in primary health centres having less than five registered nurses. The participants took average 20 minutes to complete the responses on the tool. However, they did not indicate any difficulty in providing their responses.

6.2.2 Sampling and Data Collection

Pilot Study

Hospitals were selected using purposive sampling technique. Those hospitals having more than five qualified registered nurses, with a minimum of six months experience, and those granting permission to interact with the nurses were selected for the study. Registered nurses working in the various areas of work (Medicine-M, Surgery-S, Obstetrics and Gynaecology-OG, Paediatrics-Ped, Casualty/OT/Intensive Care Unit-E, Psychiatry-Psy and Community-Com) at different levels of health care (Tertiary, Secondary and Primary) in the private, government and autonomous sector having different levels of qualification, experience, age, religion, marital status, employment status and gender were selected in the study using stratified random sampling. Data were collected through self report from registered clinical nurses working in varied clinical settings.

Initially, Pilot study was conducted on 50 nurses from one private and two government settings to test the feasibility of conducting the research and identify need for modification of the scale used to measure the construct. No difficulty was experienced, neither in terms of the items nor the feasibility except for the busy schedule of the respondents causing the delay in completing the responses on the tool.

Data Collection

The tool was administered to a total of 1057 registered nurses personally. To avoid researcher presence bias or compulsion for favourable responses and considering their demanding work schedule, the participants were given a period of one week to complete their response on the tool. While collecting the tool back it was noticed that many participants had not completed their responses owing to their hectic work schedule. To avoid high attrition, each tool was checked for completeness while receiving back. In case of incomplete tools, the participants were requested to complete the same within another week, after which the tool was collected. A total of 909 self reported data sets were received out of which 78 self reports were found to be incomplete.

Data were examined for completeness and entered into SPSS version 25 for analysis. Following entry of 831 self reports, the data were checked for missing and

incomplete responses and outliers. The usable self reported data sheets were 749. The data were further checked using descriptive statistics. Shape of data distribution for normality was examined through scatter plots, skewness, and kurtosis. Reliability estimate for internal consistency of the 38 item NPS* using Cronbach α was 0.910. The data set of 749 was divided into two subsets, i.e. sixty percent (451) which was used for exploratory factor analysis and 40% (298) which was used for confirmatory factor analysis.

6.2.3 Item reduction and Extraction of Factors

Factor analysis is used to demonstrate the basic goal of obtaining groups of highly inter-correlated variables or measured variables into distinct factors or underlying constructs (Hair, Black, Babin, & Anderson, 2010). Exploratory Factor Analysis (EFA) evaluates the construct validity in the initial scale development phase and the extracted factors explicate the maximum variance in the scale. Thus, a large set of items can be grouped into meaningful subsets which measure different factors (Worthington & Whittaker, 2006).

Exploratory Factor Analysis was performed with the aim to reduce and group items together so that each factor would represent a consistent content area using sixty percent (451) of the sample. Principal component analysis with promax rotation was used with the aim to retain factors extracted with Eigen values greater than 1. Items communalities confirms the common variance shared by each measured item with other items of the construct on which it loads (Hair, Black, Babin, & Anderson, 2010). In social sciences the acceptable value of item communalities is .4 to .7 (Costello & Osborne, 2005). In this data set the items exhibiting communalities above .4 were retained as shown in Table 6.2.

Table 6.2 : Item Communalities: Nurse Professionalism Scale

	Items	Initial	Extraction
PRA2	I maintain standards of conduct/practice which add to the respect/status of the profession.	1.000	.566
PRA3	I carry out nursing responsibilities within the framework of professional boundaries.	1.000	.425
PRA5	I accept accountability for my own decisions and actions.	1.000	.557

PRA7	I take responsibility for continuous improvement of current nursing care practice.	1.000	.485
CIR1	I establish and maintain effective interpersonal relationships with patients and their significant others.	1.000	.493
VHB1	I take appropriate action to protect patients from harmful and unethical practice.	1.000	.613
VHB2	I consider relevant facts while taking decisions in the best interest of patients.	1.000	.550
VHB3	I encourage and support patients in their right to speak for themselves on issues affecting their health and welfare.	1.000	.628
Man1	I ensure appropriate allocation and utilization of available resources.	1.000	.570
Man3	I use judgment in relation to individual competence while delegating responsibility to colleagues, patients and relatives.	1.000	.498
Man4	I facilitate conducive work culture in order to achieve patient care objectives.	1.000	.674
Man8	I participate in policy decisions related to patient care services.	1.000	.581
Man9	I work with patients to identify their needs and sensitize policy makers and funding agencies for resource allocation.	1.000	.546
PA1	I take responsibility for updating my own knowledge and competencies.	1.000	.458
PA2	I contribute to the development of nursing practice.	1.000	.597
PA3	I participate in determining and implementing quality care.	1.000	.417
PA4	I ensure the protection of the human rights while pursuing the advancement of knowledge.	1.000	.450
PA5	I contribute to core of professional knowledge by conducting and participating in research.	1.000	.549

"Extraction Method: Principal Component Analysis".

The Cattel's scree test identifies the optimal number of factors which can be extracted in a graphical presentation. The scree test of the data set indicates five factors above one as shown in Fig. 6.1.
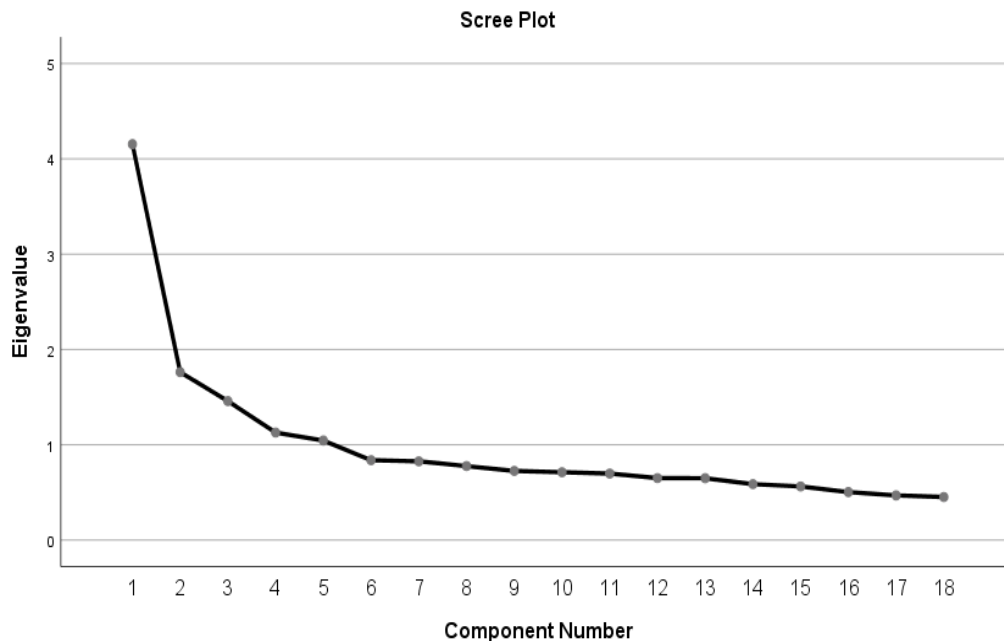
Fig. 6.1: Cattel's Scree plot indicating the extraction of factors

Desirable factor loadings of ± .5 and greater indicate a solid factor and are considered practically significant (Hair, Black, Babin, & Anderson, 2010; Costello & Osborne, 2005). However, factor loadings exceeding .30 or .40 are considered as meaningful when the sample size per variable is between 5 and 10 respondents (Floyd & Widaman, 1995). The sample size was 451 which is more than 10 per variable and the factor loadings obtained in the data set are between .81 and .54 (Table. 2) Four factors are explained by 3-5 items. A two item factor can also be retained and considered acceptable if the items are strongly correlated (r > .70; or >.60) and reasonably uncorrelated with other variable (Worthington & Whittaker, 2006; Pedroso et al., 2016). The factor with two items (r=.507) and factor loadings .753 (VHB1) and .739 (VHB3), was considered meaningful and retained in this study as shown in Table 6.3.

Table 6.3: Factor Loadings: Nurse Professionalism Scale

I	Professional Advancement/Development	Factor Loadings
PA2	I contribute to the development of nursing practice.	.752
Man9	I work with patients to identify their needs and sensitize policy makers and funding agencies for resource allocation.	.746
PA5	I contribute to core of professional knowledge by conducting and participating in research.	.699
Man8	I participate in policy decisions related to patient care services.	.685
II	**Management**	
Man4	I facilitate conducive work culture in order to achieve patient care objectives.	.831
VHB2	I consider relevant facts while taking decisions in the best interest of patients.	.637
Man3	I use judgment in relation to individual competence while delegating responsibility to colleagues, patients and relatives.	.610
PA1	I take responsibility for updating my own knowledge and competencies.	.580
PA4	I ensure the protection of the human rights while pursuing the advancement of knowledge.	.529
III	**Nursing Practice**	
CIR1	I establish and maintain effective interpersonal relationships with patients and their significant others.	.685
PRA2	I maintain standards of conduct/practice which add to the respect/status of the profession.	.671
PRA7	I take responsibility for continuous improvement of current nursing care practice.	.648
PA3	I participate in determining and implementing quality care.	.604
IV	**Professional Responsibility and Accountability**	
Man1	I ensure appropriate allocation and utilization of available resources.	.726
PRA5	I accept accountability for my own decisions and actions.	.678
PRA3	I carry out nursing responsibilities within the framework of professional boundaries.	.569
V	**Valuing Human Being**	
VHB1	I take appropriate action to protect patients from harmful and unethical practice.	.753

VHB3	I encourage and support patients in their right to speak for themselves on issues affecting their health and welfare.						.739

"Extraction Method: Principal Component Analysis".
"Rotation Method: Promax with Kaiser Normalization"
a. Rotation converged in 6 iterations.

In social sciences a factor solution accounting for the total variance extracted up to 60 percent or a little less (Hair, Black, C., Babin, & Anderson, 2010), at least 50 percent is acceptable (Streiner, 1994; Floyd & Widaman, 1995). Five factors measured by a total of 18 items explained the total cumulative variance extracted at 53.651 percent as shown in Table 6.4.

Table 6.4 : Total Variance Explained: Nurse Professionalism Scale

Total Variance Explained							
Compo-nent	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	4.135	22.974	22.974	4.135	22.974	22.974	2.747
2	1.775	9.862	32.837	1.775	9.862	32.837	2.909
3	1.523	8.462	41.298	1.523	8.462	41.298	2.404
4	1.149	6.385	47.683	1.149	6.385	47.683	2.119
5	1.074	5.968	53.651	1.074	5.968	53.651	1.949
6	.906	5.031	58.682				
7	.866	4.811	63.493				
8	.794	4.411	67.904				
9	.740	4.112	72.016				
10	.701	3.897	75.913				
11	.658	3.654	79.567				
12	.637	3.538	83.104				
13	.622	3.457	86.561				
14	.582	3.232	89.794				
15	.560	3.114	92.907				
16	.475	2.637	95.544				
17	.404	2.243	97.787				
18	.398	2.213	100.000				

Extraction Method: Principal Component Analysis.
a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

The suitability of data was assessed for factor analysis through Kaiser-Meyer-Oklin measure of sample adequacy (MSA) value of .809 indicates sample adequacy.

Bartlett Test of Sphericity (BTS) was significant (χ2 1569.861, df= 153, p<.000) and indicates sufficiently large correlations among items as shown in Table 6.5.

Table 6.5 : Measures of Sampling Adequacy: Nurse Professionalism Scale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.809
Bartlett's Test of Sphericity	Approx. Chi-Square	1569.861
	Df	153
	Sig.	.000

6.3 PHASE 3: STATISTICAL ANALYSIS AND STATISTICAL EVIDENCE OF THE CONSTRUCT (SCALE EVALUATION)

6.3.1 Test of Dimensionality through Confirmatory Factor Analysis (CFA)

"Tests of dimensionality determine whether the measurement of items, their factors, and functions are the same across two independent samples or within the same sample measured at different time intervals. Such tests can be conducted using independent confirmatory factor analysis" (Boateng et al., 2018). It is a form of psychometric evaluation that approves for the systematic comparison of alternative a-priori factor structure on the basis of systematic model fit evaluation procedures and assesses the relationship between latent constructs (Carpenter, 2018). Obtaining a good model fit to the data in a different sample supports the factor structure reliability and validity of the scale (Worthington & Whittaker, 2006). Confirmatory factor analysis using AMOS version 23 was conducted using the data obtained in a split data set from 298 (40%) respondents. Confirmation of factors is based on the fit indices which range from 0 to 1, and values above 0.9 and closer to 1 suggest good model fit (Worthington & Whittaker, 2006; Pedroso et al., 2016). Root mean square residual (RMR) signifies the average residual value obtained from the fit of the variance–covariance matrix in the hypothesized model to the variance–covariance matrix in the sample data (Byrne, 2010). In this study the model fit indices obtained are shown in table 6.6, which indicate the model fit and the confirmation of factors in the Nurse Professionalism Scale (NPS). Path weights of scale items having statistical significance ($p < .05$) and factor loadings $\geq .40$ are considered as having practical

significance (Hair, Black, Babin, & Anderson, 2010). Table 6.7 indicates the regression path weights with the level of significance confirming the item-dimension relation and table 6.8 shows the standardized regression weights which range from 0.870 to 0.410. Also, AMOS 22 output box identified all the standardized residuals values to be less than |4| and majority modification indices below 10 indicating no requirement for change in the model (Hair, Black, Babin, & Anderson, 2010).

Table 6.6 : Fit indices of the CFA model: Nurse Professionalism Scale

Fit indices	CMIN/DF	GFI	AGFI	IFI	TLI	CFI	RMSEA	P CLOSE
Accepted values	<3 <5	0.90 <0.95	0.85 <0.90	0.90 <0.95 <1	0.90 <0.95 <1	0.90 <0.95 <1	<0.05 <0.08	>0.5
Proposed Model	1.747	0.926	0.901	0.901	0.879	0.899	0.050	.476

Table 6.7 : Regression path coefficients and significance: Nurse Professionalism Scale

Path			Estimate	S.E.	C.R.	P	Label
Man	<---	Prof	1.000	Reference point			
ProfAdv	<---	Prof	.960	.171	5.618	***	Significant
NP	<---	Prof	.380	.076	4.987	***	Significant
ProfRA	<---	Prof	.496	.095	5.230	***	Significant
VHB	<---	Prof	.556	.101	5.487	***	Significant
MAN4	<---	Man	1.000	Reference point			Significant
VHB2	<---	Man	.824	.093	8.839	***	Significant
PA1	<---	Man	1.063	.139	7.628	***	Significant
MAN3	<---	Man	.910	.126	7.237	***	Significant
PA4	<---	Man	.753	.085	8.807	***	Significant
MAN8	<---	ProfAdv	1.000	Reference point			Significant
MAN9	<---	ProfAdv	.752	.116	6.503	***	Significant
PA2	<---	ProfAdv	.904	.117	7.720	***	Significant
PA5	<---	ProfAdv	1.109	.138	8.047	***	Significant
PA3	<---	NP	1.000	Reference point			Significant

Path			Estimate	S.E.	C.R.	P	Label
CIR1	<---	NP	.841	.159	5.307	***	Significant
PRA2	<---	NP	.591	.123	4.798	***	Significant
PRA7	<---	NP	.818	.153	5.338	***	Significant
PRA3	<---	ProfRA	1.000	Reference point			Significant
PRA5	<---	ProfRA	1.057	.194	5.452	***	Significant
MAN1	<---	ProfRA	1.016	.170	5.986	***	Significant
VHB1	<---	VHB	1.000	Reference point			Significant
VHB3	<---	VHB	.974	.207	4.712	***	Significant

*** Significant at the 0.001 level (two-tailed).

Table 6.8 : Standardized Regression Weights: Nurse Professionalism Scale (Group number 1 - Default model)

			Estimate
Man	←	Prof	.840
ProfAdv	←	Prof	.635
NP	←	Prof	.574
ProfRA	←	Prof	.646
VHB	←	Prof	.870
MAN4	←	Man	.664
VHB2	←	Man	.676
PA1	←	Man	.564
MAN3	←	Man	.538
PA4	←	Man	.630
MAN8	←	ProfAdv	.650
MAN9	←	ProfAdv	.485
PA2	←	ProfAdv	.617
PA5	←	ProfAdv	.669
PA3	←	NP	.624
CIR1	←	NP	.482

			Estimate
PRA2	←	NP	.410
PRA7	←	NP	.488
PRA3	←	ProfRA	.605
PRA5	←	ProfRA	.480
MAN1	←	ProfRA	.607
VHB1	←	VHB	.517
VHB3	←	VHB	.436

Labelling the factors or the dimensions

Variables with higher loadings on a particular factor are considered as more significant and more representative of the factor. Hence the factor is labelled with reference to the variable with higher factor loading (Hair, Black, Babin, & Anderson, 2010). In this study also, the factors are labelled considering the higher factor loadings. In **Factor I**, the variable PA5 with highest loading and PA2 are originally (CPCNI-INC) from the dimension **Professional Advancement.** The items MAN9 and MAN8 reflect development of the profession through working with other stake holders and participating in policy decisions**.** Hence, the factor is labelled as **Professional Advancement/Development.** With reference to **Factor II,** two variables with higher factor loadings (MAN4 and MAN3) are originally from the dimension **Management,** the variable **VHB2** reflects decision making which can be considered as a management function. Hence the second factor is labelled as **Management. Factor III,** is majorly a reflection of N**ursing Practice**. **Factor IV** is explained by two main variables; PRA5 and PRA3, hence the label **Professional Responsibility and Accountability,** is retained as from the original CPCNI**-INC**. **Factor V** is explained by two variables from the original dimension **Valuing Human Being,** hence the label is retained.

Nurse Professionalism Scale

I	**Professional Advancement/Development**
PA2	I contribute to the development of nursing practice.
Man9	I work with patients to identify their needs and sensitize policy makers and funding agencies for resource allocation.
PA5	I contribute to core of professional knowledge by conducting and participating in research.
Man88	I participate in policy decisions related to patient care services.
II	**Management**
Man4	I facilitate conducive work culture in order to achieve patient care objectives.
VHB2	I consider relevant facts while taking decisions in the best interest of patients.
Man3	I use judgment in relation to individual competence while delegating responsibility to colleagues, patients and relatives.
PA1	I take responsibility for updating my own knowledge and competencies.
PA4	I ensure the protection of the human rights while pursuing the advancement of knowledge.
III	**Nursing Practice**
PRA2	I maintain standards of conduct/practice which add to the respect/status of the profession.
CIR1	I establish and maintain effective interpersonal relationships with patients and their significant others.
PRA7	I take responsibility for continuous improvement of current nursing care practices.
PA3	I participate in determining and implementing quality care.
IV	**Professional Responsibility and Accountability**
PRA5	I accept accountability for my own decisions and actions.
Man1	I ensure appropriate allocation and utilization of available resources.
PRA3	I carry out nursing responsibilities within the framework of professional boundaries.
V	**Valuing Human Being**
VHB3	I encourage and support patients in their right to speak for themselves on issues affecting their health and welfare.
VHB1	I take appropriate action to protect patients from harmful and unethical practice.

6.3.2 Reliability Analysis

"Reliability is an assessment of the degree of consistency between multiple measurements of a variable" (Hair, Black, Babin, & Anderson, 2010). The acceptable level of reliability coefficient (Cronbach's alpha) used to assess the consistency of the entire scale is .70 and .60 in exploratory studies. Also, the reliability value increases with the increase in the number of items (Hair, Black, Babin, & Anderson, 2010). The reliability of the 18 item scale was .791, suggesting good scale reliability. The calculated reliability coefficient for each dimension is above .50 as seen in table 6.9.

Table 6.9 : Reliability: Nurse Professionalism Scale and the dimensions

	Scale /Dimension	Cronbach's Alpha	No. of Items
1	Overall scale	.791	18
1.1	Professional Advancement/Development	.728	4
1.2	Management	.688	5
1.3	Nursing Practice	.594	4
1.4	Professional Responsibility and Accountability	.502	3
1.5	Valuing Human Being	.507	2

The acceptable alpha value for Cronbach alpha is ≥.70 and the item-total correlations should exceed a minimum acceptable value of 0.30 (Tylka, Bergeron, & Schwartz, 2005; Hair, Black, Babin, & Anderson, 2010). In this data the cronhbach alpha value is 0.791 and the drop in the corrected inter-item correlation is above 0.3 except for the items PRA2 (.249), PRA5 (.234) and VHB1 (.291), which indicates good internal consistency of the scale. The "Cronbach's Alpha if item deleted" column indicates values, if that specific item is deleted. All of the values are lower than the aggregated alpha value (.791); i.e., when all the items taken together. This indicates that removal of any one variable from the scale will negatively affect the scale internal stability as seen in table 6.10.

Table 6.10 : Item – Total statistics: Nurse Professionalism Scale

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
PRA2	69.6253	73.684	.249	.229	.788
PRA3	69.8226	71.600	.350	.204	.783
PRA5	69.8226	72.542	.234	.201	.789
PRA7	69.9069	71.365	.342	.245	.783
CIR1	69.7073	72.732	.334	.188	.784
VHB1	69.6851	72.087	.292	.196	.786
VHB2	69.9667	69.557	.467	.362	.776
VHB3	69.9579	70.632	.366	.243	.781
MAN1	69.9313	70.229	.345	.219	.783
MAN3	70.2395	68.458	.356	.230	.782
MAN4	70.1885	68.313	.447	.392	.776
MAN8	70.5455	64.377	.467	.361	.774
MAN9	70.7007	64.948	.405	.271	.780
PA1	70.3304	65.875	.413	.273	.778
PA2	70.6763	64.802	.467	.402	.774
PA3	69.7406	72.446	.336	.196	.784
PA4	69.8071	70.360	.449	.293	.778
PA5	70.7761	65.352	.422	.330	.778

6.3.3 Construct Validity

Construct Validity (CR) is the "the extent to which a set of measured items actually reflects the theoretical latent construct that the items are designed to measure" and hence deals with measurement accuracy (Hair, Black, Babin, & Anderson, 2010).

Convergent and discriminant validity

Convergent validity assesses the degree to which two measures of the same concept are correlated", while discriminant validity is "the degree to which two conceptually similar concepts are distinct" (Hair, Black, Babin, & Anderson, 2010).

Convergent validity means that the items within a single factor are highly correlated and is attained when items which measure a specific construct converge and share a significantly high proportion of common variance. Convergent validity is estimated either by considering the factor loading in the measurement model or by estimating the Average Variance Extracted (AVE). High factor loadings indicate convergence on the latent construct. An ideal rule of thumb is to consider standardized loading estimates of 0.7. Average variance extracted is "the amount of variance captured by an underlying factor in relation to the amount of variance due to measurement error" (Hatcher 1994; as cited by Baldwin & Caldwell, 2003). AVE is calculated as the sum of all the squared standardized factor loadings divided by the number of items. An AVE ≥0.5 or higher is considered appropriate for adequate convergence since this explains that the variance extracted by the factor is greater than the measurement error. Convergent Validity of dimensions in this data set is indicated through average loadings of 0.72, 0.64, 0.65, 0.66 and 0.75 and AVE value of 0.52, 0.42, 0.43, 0.44, and 0.56 respectively as seen in table 6.11.

Table 6.11 : Convergent Validity: Nurse Professionalism Scale

Variable	Factor loadings	Average Factor Loadings on Dimension	Square of Factor loadings	Average variance extracted for dimension (AVE)
Professional Advancement/Development				
PA2	0.752		0.566	
MAN9	0.746		0.557	0.52
PA5	0.699	0.72	0.489	
MAN4	0.685		0.47	
Management				
MAN4	0.831		0.69	
VHB2	0.637		0.41	0.42
MAN3	0.610	0.64	0.37	
PA1	0.580		0.34	
PA4	0.529		0.28	
Nursing Practice				
CIR1	0.685		0.47	
PRA2	0.671		0.45	0.43
PRA7	0.648	0.65	0.42	

PA3	0.604		0.364	

Professional Responsibility and Accountability

MAN1	0.726		0.53	
PRA5	0.678	0.66	0.46	0.44
PRA3	0.569		0.32	

Valuing Human Being

VHB1	0.753	0.75	0.567	0.56
VHB3	0.739		0.546	

Table 6.12 : Component Correlation Matrix: Nurse Professionalism Scale

Component Correlation Matrix					
Component	1	2	3	4	5
1	1.000	.285	.253	.101	.154
2	.285	1.000	.209	.286	.223
3	.253	.209	1.000	.237	.251
4	.101	.286	.237	1.000	.233
5	.154	.223	.251	.233	1.000

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.

Table 6.12 shows the component correlation matrix of the five dimensions which is used for testing the convergent and discriminant validity of the scale. The dimensions are composed of four, five, four, three and two items respectively. The last dimension had two variables; hence the factor loadings in exploratory factor analysis and the component correlation matrix are used for estimating the convergent and discriminant validity instead of Confirmatory Factor Analysis (CFA).

Table 6.13 : Discriminant Validity: Nurse Professionalism Scale

Dimension	I	II	III	IV	V
I	1	0.47	0.475	0.48	0.54
II	0.47	1	0.425	0.43	0.49
III	0.475	0.425	1	0.435	0.495
IV	0.48	0.43	0.435	1	0.5
V	0.54	0.49	0.495	0.5	1

Discriminant validity is the extent to which the factors are distinct and uncorrelated. In the pattern matrix the items should be strongly related to a single factor and unrelated or weakly loading on another factor, i. e. cross-loadings on more than one factor should differ by > 0.2 (Bryne, 2005). The pattern matrix of this data set did not indicate any cross loadings on suppressing small coefficients below 0.4. The factor correlation matrix does not show any correlation > 0.7, this implies that every factor identifies a unique variable. Discriminant validity is also supported when the AVE of a factor is greater than its squared correlation with other factors (Hair, Black, Babin, & Anderson, 2010; Baldwin & Caldwell, 2003). The component correlation matrix shows maximum correlation of 0.286 and the square of this correlation is 0.081 which is below any of the inter-dimension average AVE values (0.425 - 0.54) as well as the AVE values (0.42-0.56), thus supporting discriminant validity among dimensions of the scale.

6.4   SOCIAL DESIRABILITY RESPONDING BIAS

There have been criticisms regarding the use of self report measures related to attitude, behaviour and feelings because respondents tend to provide favourable representative answers. Pressure of social desirability, the perceived value of projecting an image which represents socially approved behavior is a major element of self presentation (Nunnally, 1978; cited by Hays, Hayashi, & Stewart, 1989).

"Socially desirable responding (SDR) is typically defined as the tendency to give positive self-descriptions" (Paulhus, 2002). It is the propensity of individuals to disagree with socially unattractive traits and behaviors and admit the socially desirable ones (Zerbe & Paulhus, 1987).

A variety of reasons pose questions about the validity of the causal conclusions and the confidence on self-report measurements of both dependent and independent constructs. Some of such contexts are systematic response distortions, mono-method bias, common method variance and the psychometric properties of scales (Hays, Hayashi, & Stewart, 1989; Razavi, 2001). Social desirable response set (SDRS) is a potential useful control variable in multivariate analysis. A short SDRS measure can be used as a practical alternative to reduce the burden of lengthy instruments (Hays, Hayashi, & Stewart, 1989).

Randall& Fernandes (1991) found self-reported ethical conduct as more closely associated with cognisant under-reporting of undesirable behaviors and over-reporting of desirable behaviours. However, Crutzen & Göritz (2010) identified that self-reported health risk behaviors were not associated with social desirability bias. Self reported professionalism behaviour among nurses could be vulnerable to socially desirable responding. Hence, the short SDRS measure consisting of five items (SDRS-5, Hays, Hayashi, & Stewart, 1989) was incorporated to combat the issue of social desirable responding. However, there was no correlation between the dimensions of professionalism among nurses and the SDR which is presented in Table 6.14.

Table 6.14 : Correlation between SDR and Nurse Professionalism Scale

		Man	Prof_Adv	Nur_Prac	Prof_AR	VHB	SDR
Man	Pearson Correlation	1	.392**	.289**	.392**	.348**	-.017
	Sig. (2-tailed)		.000	.000	.000	.000	.636
	N	749	749	749	749	749	749
Prof_Adv	Pearson Correlation	.392**	1	.232**	.153**	.230**	-.051
	Sig. (2-tailed)	.000		.000	.000	.000	.161
	N	749	749	749	749	749	749
Nur_Prac	Pearson Correlation	.289**	.232**	1	.320**	.291**	-.018
	Sig. (2-tailed)	.000	.000		.000	.000	.628
	N	749	749	749	749	749	749
Prof_AR	Pearson Correlation	.392**	.153**	.320**	1	.320**	-.011
	Sig. (2-tailed)	.000	.000	.000		.000	.760
	N	749	749	749	749	749	749
VHB	Pearson Correlation	.348**	.230**	.291**	.320**	1	.059
	Sig. (2-tailed)	.000	.000	.000	.000		.107
	N	749	749	749	749	749	749
SD	Pearson Correlation	-.017	-.051	-.018	-.011	.059	1
	Sig. (2-tailed)	.636	.161	.628	.760	.107	
	N	749	749	749	749	749	749

**. Correlation is significant at the 0.01 level (2-tailed).

6.5   COMMON METHOD VARIANCE

Common method variance (CMV) may be another concern when self-reporting instruments are used to collect data simultaneously from the same participants. It is the ''variance that is attributable to the measurement method rather than to the constructs the measures represent'' (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

CMV creates false internal consistency which is strongest when the dependent and independent variables measures are derived from the same respondents. It can lead to systematic measurement errors. Thus, either inflating or deflating the observed relationship between constructs can lead to Type I and Type II errors (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003)

Some procedural remedies can be implemented to reduce the likelihood of CMV such as mixing the order of questions and escalating the distance between researcher and respondents and maintaining the anonymity of respondents (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Chang, Van Witteloostuijn, & Eden, 2010). In this research, assurance was given by the researcher in maintaining the confidentiality and anonymity of the respondents, also they were not required to disclose their identity. The researcher did not remain with the respondents while they were actually completing the instruments.

Post hoc Harman one-factor analysis is a method used to check the presence of common method variance in the data. In this method all items are loaded into exploratory factor analysis to check whether one distinct factor emerges that accounts for bulk of covariance among the measures (Chang, Van Witteloostuijn, & Eden, 2010).

For "Harman's single-factor test", software SPSS 25 was used for extraction of fixed number of factor which was set to one without rotation. The single factor explained 22% of variance which is less than 50% of the total variance explained by five factors (53%). This indicates that there is no issue of common method bias as shown in Table 6.15; also the model fit indices of the single factor in confirmatory analysis are unsatisfactory as compared to the model fit indices of five factor model as shown in Table 6.16.

Table 6.15 : Total Variance Explained: Harman one-factor model of Nurse Professionalism Scale

	Total Variance Explained					
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.135	22.974	22.974	4.135	22.974	22.974
2	1.775	9.862	32.837			
3	1.523	8.462	41.298			
4	1.149	6.385	47.683			
5	1.074	5.968	53.651			
6	.906	5.031	58.682			
7	.866	4.811	63.493			
8	.794	4.411	67.904			
9	.740	4.112	72.016			
10	.701	3.897	75.913			

The table is curtailed.
Extraction Method: Principal Component Analysis.

Table 6.16 : Model Fit Indices: Harman one-factor model and the five factor model of Nurse Professionalism Scale

Fit indices	CMIN/ DF	GFI	AGFI	IFI	TLI	CFI	RMSEA	P CLOSE
Accepted values	<3 <5	0.90 <0.95	0.85 <0.90	0.90 <0.95 <1	0.90 <0.95 <1	0.90 <0.95 <1	0.05 <0.08	>0.5
Harman one-factor model	3.181	0.837	0.791	0.699	0.646	0.693	0.086	0.000
Five factor model	1.746	0.929	0.902	0.906	0.879	0.903	0.05	0.478

The second method implemented for testing the presence of common method bias is by using the unmeasured latent factor method (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). This test was also conducted in the confirmatory factor analysis (CFA) by adding an unmeasured latent factor (CLF) in the measurement model on which all measured indicators of the five latent dimensions are loaded together. Thereby, a ''six-factor model'' was designed which included the five latent dimensions and the CMB. Unmeasured latent factor method identifies the variance

that is common to all measured indicators. The loadings on the CLF are constrained so that they remain equal to each other, thereby, obtain equal unstandardized loadings. The obtained squared unstandardized loadings are considered to calculate the percentage of common variance amongst all the indicators in the model. The value thus, obtained is identified as the common method bias. Common variance values less than 15% suggests absence of common method bias (Eichhorn, 2014; Sony & Mekoth, 2016).

Fig. 6.2 indicates the unstandardized loadings as .30, and the square is 9%, which is less than 15%. This suggests no common method bias in the responses.
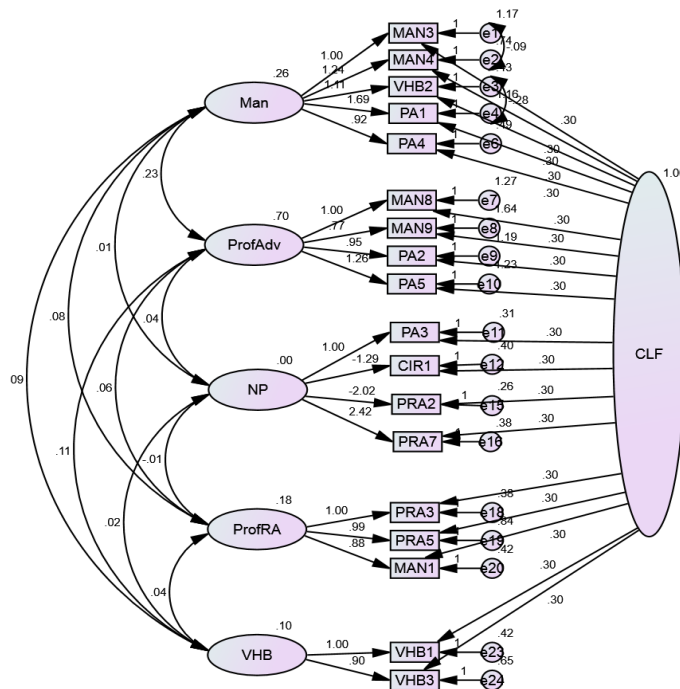
Fig. 6.2 : Estimation of common method bias

The entire Nurse Professionalism Scale (NPS) development process is explicitly described in this chapter. This instrument would support gathering data regarding the professional behaviour of nurses in different clinical settings. It will be used to collect data from the registered nurses who are the main respondents in the study.

CHAPTER 7

ANALYSIS AND INTERPRETATION

Analysis refers to the process of computation of certain measures besides the search for patterns of relationship among data-groups. Data analysis entails the identification and measurement of the variation in a set of variables, among the variables or between the dependent variable and one or more than one independent variables (Hair, Black, Babin, & Anderson, 2010). It involves estimation of the values of unknown population parameters and testing of hypotheses which support inferences drawn from the sample statistics (Kothari, 2004). Thus, "in the process of analysis, relationships or differences supporting or conflicting with original or new hypotheses should be subjected to statistical tests of significance to determine with what validity, data can be said to indicate any conclusions" (Ackoff 1961; cited by Kothari, 2004).

This chapter explains the data analysis results and testing of hypothesis in the proposed model presented in the previous chapter. In this study the data was collected through self report from registered clinical nurses. The data sheets were administered to a total of 1057 registered nurses personally with clear explanation. A total of 909 self reported data sets were received. Data were examined for completeness and entered into SPSS version 25 for analysis. Seventy eight self reports were found to be incomplete. Following data entry of 831 self reports, the data were checked for missing, incomplete responses and outliers. After excluding the data sheets with missing responses on items and the outliers, the usable self reported data sheets were 749. These data sheets (749) were split as 60% (451) and used for exploratory factor analysis and 40% (298) were used for confirmatory factor analysis. The data is analysed in line with the objectives using General Linear Model program (GLM) and repeated measures ANOVA in SPSS (Version 25) and Structural Equation Modeling (SEM) using AMOS software (Version 22). A brief description about the data analysis techniques used in the study is presented in this chapter.

7.1 DIFFERENCE IN THE NURSES' PERCEPTION ABOUT THE STAKEHOLDERS' IMAGE OF A NURSE.

Objective 1: To test the difference in the nurses' perception about the stakeholders' image of a nurse

H1   There is significant difference in the nurses' perception about the stakeholders' image of a nurse.

In this study, data related to the construct, " Nurses perception about stakeholders image of a nurse" was collected from nurses with respect to four different stakeholders; "Nurses' perception about doctors' image of a nurse (NP-DIN)", "Nurses' perception about patients' image of a nurse (NP-PIN)", "Nurses' perception about other hospital staffs' image of a nurse (NP-OHSIN)", "Nurses' perceived image of a nurse (NP-IN)". The data was tested for mean and standard deviation as well as within subject difference using the General Linear Model program (GLM) and repeated measures ANOVA in SPSS. This analytical technique creates the "Within-Subjects Factor" which is considered as an independent variable from among the two or more existing variables which then are considered as the levels of the new independent variable (Leech, Barrett, & Morgan, 2005).

REPEATED MEASURES ANOVA

Assumptions of repeated measures ANOVA include:

- Independence of observations (within-subjects or repeated measures)
- Deviations from the mean of each person's score on one measure, and more than one measure for each person.
- The covariance involves deviations from the mean of each of two measures for each person.
- Homogeneity assumption known as sphericity, mandates equal variances and covariance for every level of within subject variable.

Behavioral science data rarely meets the sphericity assumption which can seriously influence the results. Fortunately, this problem can be dealt with by adjusting the degrees of freedom or using multivariate tests of the within-subjects

effect and test whether the ratings are equal. The sphericity assumption is tested using the Mauchly's test, the Huynh-Feldt tests and/or the Greenhouse-Geisser test.

The data related to the nurses' perception about stakeholders' image of a nurse was tested for the mean and standard deviation which indicate difference in the mean as shown in Table 7.1.

Table 7.1 : Mean and Standard Deviation related to Nurses' Perception about Different Stakeholders' Image of a Nurse

#	Measure	Mean	Standard Deviation
1	Nurses' perception about doctors' image of a nurse	53.2243	6.49972
2	Nurses' perception about patients' image of a nurse	51.9186	6.89358
3	Nurses' perception about other hospital staffs' image of a nurse	53.0574	6.78514
4	Nurses' perceived image of a nurse	58.3685	6.91084

All four multivariate tests have the same "F" values and are significant (230.502; P < .000). However, Wilks' Lambda is a commonly considered multivariate test. The significant "F" (230.5; P < .000) indicates that there is a difference in how the construct is rated as shown in Table 7.2.

Table 7.2 : Multivariate tests indicating the "F" values and level of significance

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Image	Pillai's Trace	.481	230.502[b]	3.000	746.000	.000	.481
	Wilks' Lambda	.519	**230.502[b]**	3.000	746.000	**.000**	.481
	Hotelling's Trace	.927	230.502[b]	3.000	746.000	.000	.481
	Roy's Largest Root	.927	230.502[b]	3.000	746.000	.000	.481

a. Design: Intercept Within Subjects Design: image
b. Exact statistic
c. Computed using alpha = .05

Further, Mauchly's test for shericity is used to test the level of significance and obtain the Epsilon (Greenhouse-Geisser or Huynh-Feldt). Mauchly's statistics is significant (W = .815; P < .000) and the epsilons (Greenhouse-Geisser =.872; Huynh-Feldt = .875), (measures of degree of sphericity) are less than 1.0. This indicates that the assumption of sphericity is violated as seen in Table 7.3.

Table 7.3 : Within subjects effects with Mauchly's test of Sphericity[a]

MEASURE_1

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	Df	Sig.	Epsilon[b] Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Image	**.815**	152.439	5	**.000**	.872	**.875**	.333

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.
a. Design: Intercept Within Subjects Design: image
b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

In such case, either the results of the multivariate tests or the epsilons are used to adjust the "dfs" numerator and denominator. Correction is made to reduce the degrees of freedom by multiplying them by Epsilon. Greenhouse-Geisser is used when Mauchly's W < 0.75 and Huynh-Feldt is used if Mauchly's W > .75. The test of within-subjects effects indicates the degrees of freedom as 3 and 2244 as shown in Table 7.4.

Table 7.4 : Within subjects effects with degrees of freedom

MEASURE_1

Source		Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Image	Sphericity Assumed	18594.250	**3**	6198.083	352.656	.000	.320
	Greenhouse-Geisser	18594.250	2.615	7110.178	352.656	.000	.320
	Huynh-Feldt	18594.250	**2.625**	7083.092	352.656	.000	.320
	Lower-bound	18594.250	1.000	18594.250	352.656	.000	.320
Error (image)	Sphericity Assumed	39439.250	**2244**	17.575			
	Greenhouse-Geisser	39439.250	1956.139	20.162			
	Huynh-Feldt	39439.250	**1963.620**	20.085			
	Lower-bound	39439.250	748.000	52.726			

a.   Computed using alpha = .05

Since the assumption sphericity is violated in this data and the Mauchly's W is more than 0.75, correction is made using Huynh-Feldt epsilon (.875) which is multiplied by 3 and 2244 yielding "dfs" of 2.625 and 1963.5. Thus values of the corrected degrees of freedom are same as the table values as shown in Table 7. 5.

Table 7.5 : Corrected values using degrees of freedom and Huynh-Feldt Epsilon

Image df	Huynh-Feldt df	Huynh-Feldt Epsilon	Value obtained after Correction
3	2.625		.875X3=2.625
2244	1963.620	.875	.875X2244= 1963.5

Hence, Repeated measures ANOVA, with Huynh-Feldt correction, indicate that there was a difference in the nurses' perception about image of a nurse with respect to doctors, patients, other hospital staff and self; $F(2.625, 1963.5) = 352.656$, $p < .000$, $R^2 = .32$. Thus **H1** is supported.

7.2   STRUCTURAL EQUATION MODELING

The multivariate analytical technique, Structural Equation Modeling (SEM) is conceptualized as an extension of multiple regression and factor analysis, or more aptly a hybrid of factor analysis and path analysis. It facilitates the most efficient and appropriate estimation of a series of individual multiple regression equations simultaneously and allows the analysis of series of the interrelationships among variables (factor analysis) and testing of hypothesized relationships among constructs (path analysis). SEM has two basic components; the measurement model and the structural model. Measurement model is tested using confirmatory factor analysis (CFA). This model permits the researcher to use multiple indicators for a single independent or dependent construct. Confirmatory factor analysis provides assessment of the contribution of each item in the scale as well as the overall scale in measuring the construct. The scale(s) are subsequently incorporated into the estimation of relationships between the independent and dependent constructs in the structural model (Hair, Black, Babin, & Anderson, 2010).

Examination of Data

In examining the data, the researcher assesses the impact of missing data, spots the outliers   and examines the assumptions underlying multivariate techniques.

Missing data and outliers

Missing data results when information from a respondent is not available on one or more items or questions in the tool(s) used for the purpose of data collection. The non availability of the information can be due to data entry error, problem with or during data collection or refusal of a respondent to provide information (Hair, Black, Babin, & Anderson, 2010). "Outliers are the observations with unique combination of characteristics that are distinct different from the other observations" (Hair, Black, Babin, & Anderson, 2010). An outlier might have an extreme value on one or more items in the data.

Assumptions underlying multivariate analysis techniques

To test the data for normality the shape of data distribution was examined through scatter plots, skewness, and kurtosis. "The linearity of the relationship between the dependent and the independent variables represents the degree to which the change in the dependent variable is associated with the independent variables" (Hair, Black, Babin, & Anderson, 2010). It relates to the pattern of association between every pair of variables and the ability of the coefficient of correlation to sufficiently represent the relationship. Linearity fulfils the assumption that there is a linear relationship between each of the predictor and the dependent variable and that the residual or error is uncorrelated with the predictors and is normally distributed (Leech, Barrett, & Morgan, 2005). "Linearity is used to express the concept that the model possesses the properties of additivity and homogeneity. Linear models predict the values that fall in a straight line by having a constant unit change (slope) of the dependent variable for a constant unit change of the independent variable" (Hair, Black, Babin, & Anderson, 2010). In testing for linearity of this study data, highest values were obtained for the linear model for all the relations as compared to the values in the other models indicating linear relations among the variables as shown in Table 4.5 and the graphs in **Appendix J**.

Another condition that can pose problematic is multi-colinearity. This condition arises when the inter-correlations among the set of predictor variables are high or when two or more predictor variables contain the same information. This condition can lead to inaccurate and/or misleading results. Colinearity is exhibited when there is high correlation between two independent variables. High correlation between three or more independent variables is termed as multicolinearity. Two independent variables are considered to exhibit complete colinearity, when the coefficient of correlation among them is 1 and absolute no colinearity if the coefficient of correlation among them is 0. Direct measure estimate for multi-colinearity is tolerance. Tolerance is defined as the degree of variability of the specific or selected independent variable that is not explained by the other independent variables under study. The variance inflation factor (VIF) is the calculated value that is inverse of tolerance values. The cut of acceptable value of VIF is 3 to 5 (Leech, Barrett, & Morgan, 2005; Hair, Black, Babin, & Anderson, 2010). In the present data,

all the paths exhibit VIF values below 3 indicating absence of multi-colinearity among variables as shown in Table 4.5., Methodology chapter 4. The graphs indicating linear relationship among variables are shown in **Appendix J**.

7.3   CONFIRMATORY FACTOR ANALYSIS

"Tests of dimensionality determine whether the measurement of items, their factors and functions are the same across two independent samples or within the same sample at a different point in time. Such tests are conducted using independent confirmatory factor analysis (Boateng et al., 2018). It is a form of psychometric evaluation that permits for the systematic comparison of alternative a-priori factor structure on the basis of systematic model fit evaluation procedures and assesses the relationship between latent constructs (Carpenter, 2018). Obtaining a good model fit to the data in a different sample supports the factor structure reliability and validity of the scale (Worthington & Whittaker, 2006).

Confirmation of factors is based on the fit indices which range from 0 to 1 and values closer to 1 suggest good model fit (Pedroso et al., 2016). **Goodness of fit** (GOF) denotes the accuracy with which the specified model reproduces the observed covariance matrix with the indicator items. The closer the values these two matrices present with respect to each other, better the model fit is said to be. **Chi-square** is the central measure of difference between the estimated and the observed covariance matrices. **Normed Chi square** as a GOF measure of a model, is the ratio of chi square to the degrees of freedom. The recommended value of the ratio of chi-square to the degrees of freedom is less than or equal to 3.00 (Hair, Black, Babin, & Anderson, 2010).

The goodness of fit index or the **GFI** appraises and compares the amount of variance and covariance in the sample data together explained by the hypothesized model. The **adjusted goodness of fit index** (**AGFI**) corrects GFI by the ratio of degrees of freedom in the specific model to the accessible degrees of freedom. The acceptable range of values for GFI as well as AGFI is between 0 to 1, with higher values indicating good model fit (Bryne, 2010; Hair, Black, Babin, & Anderson, 2010).

RMR, root mean square residual indicates the value of the average residual obtained from the variance–covariance matrix fit of the hypothesized model and the variance–covariance matrix for the sample data. The average value across all the standardized residuals are indicated by the standardized RMR ranging from 0 to 1, acceptable values are ≤ 0.05, smaller values indicate better fit (Bryne, 2010; Hair, Black, Babin, & Anderson, 2010).

The **Incremental Index of Fit (IFI)** addresses the issues of sample size and the values are consistent with values of the **CFI (Comparative fit index)** reflecting a well-fitting model. Values for CFI are derived by comparing the hypothesized model with the independence model and range from zero to 1.00. **Tucker-Lewis Index (TLI),** consistent with the other indices, yields values that range from zero to 1.00. Values that approach 1 are indicative of good fit.

RMSEA, Root Mean Square Error of Approximation considers the error of approximation and represents how well the model fits a population. The discrepancy is expressed per degree of freedom, which makes it sensitive to the complexity of the model or the number of estimated parameters. The acceptable range of values is 0.03 to 0.08 with 95% confidence. AMOS tests the **closeness of fit (PCLOSE),** besides the confidence interval around the RMSEA value. The suggested value for this test is ≥ 0.50 (Bryne, 2010; Hair, Black, Babin, & Anderson, 2010).

Confirmatory factor analysis using Amos version 22 was conducted using the data from 298 (40%) registered nurses. This section presents results of the confirmatory factor analysis (CFA) for each construct. Results are provided in the form of CFA models, tables with factor loadings and respective construct model fit indices.

Ia.   Nurses' Perception about Doctors' Image of a Nurse (NP-DIN) Scale

Porter Nursing Image Scale (1991) consisting of 30 randomly matched paired bipolar adjectives under three dimensions was designed to assess nurses' self image. In this study the scale is adapted as a 14 item uni-polar scale to capture nurses' perception regarding the perceived image of a nurse by different stakeholders.

On the construct "Nurses' perception about doctors' image of a nurse (NP-DIN)", exploratory factor analysis yielded two dimensions consisting of four and five

items respectively with good factor loadings. In the confirmatory factor analysis model of the two dimension construct, item "Logical-DVPPI-IPA2" is deleted due to low factor loading (<.45).   The retained items under the dimensions with the respective factor loadings and the model fit indices obtained are given below in Table 7.6a, Fig. 7.1a. and Table 7.7a.

Table 7.6 a : CFA factor loadings: Nurses' Perception about Doctors' Image of Nurse (NP-DIN) Scale

Items		CFA Factor loadings
Inter-Personal Relation (Doc_IPR)		
DVPPI-IPR3	Rude	.63
DVPPI-IPR5	Uncooperative	.75
DVPPI-IPA1	Disorganised	.74
DVPPI-IPA4	Dishonest	.77
Inter-Personal Power (Doc_IPP)		
DVPPI-IPP5	Competent	.54
DVPPI-IPR1	Caring	.83
DVPPI-IPR2	Friendly	.47
DVPPI-IPA3	Punctual	.58
DVPPI-IPP2	Confident	.49
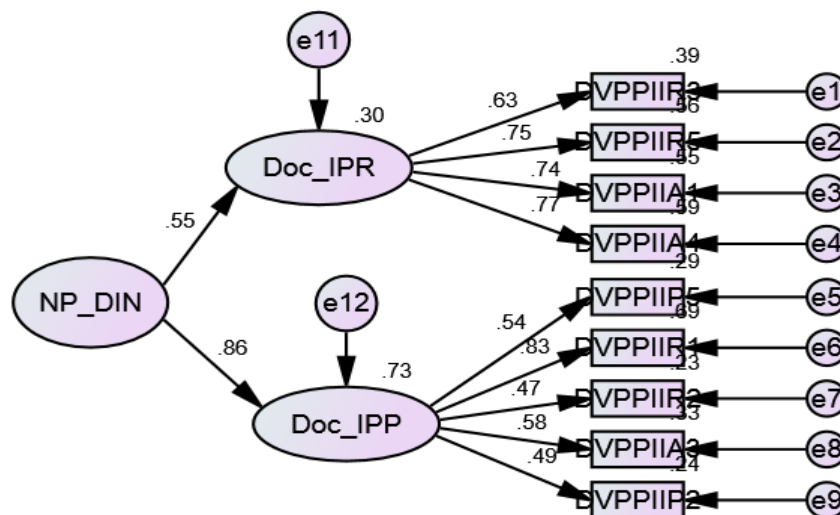
Figure 7.1 a : Path diagram: Nurses' Perception about Doctors' Image of Nurse, (NP-DIN) Scale

Table 7.7a : Model fit indices: Nurses' Perception about Doctors' Image of Nurse (NP-DIN) Scale

Model	C/df	P	GFI	AGFI	IFI	TLI	CFI	RMSEA	P CLOSE
NP-DIN	2.137	.000	.960	.932	.959	.943	.959	.062	.178

Ib.   Nurses' Perception about Patients' Image of Nurse (NP-PIN) Scale

Exploratory factor analysis of the construct "Nurses' perception about patients' image of a nurse (NP-PIN)" yielded two dimensions consisting of four and five items respectively with good factor loadings. The Confirmatory factor analysis model as a two dimension construct with the retained items under the dimensions, the respective factor loadings and the model fit indices obtained are given below in Table 7.6b, Fig. 7.1b and Table 7.7b.

Table 7.6b : CFA factor loadings: Nurses' Perception about Patients' Image of Nurse (NP-PIN) Scale

Items		CFA Factor loadings
Inter-Personal Relation (Pat_IPR)		
PVPPI-IPR3	Rude	.69
PVPPI-IPR5	Uncooperative	.77
PVPPI-IPA1	Disorganised	.75
PVPPI-IPA4	Dishonest	.70
Inter-Personal Power (Pat_IPP)		
PVPPI-IPA3	Punctual	.61
PVPPI-IPP2	Confident	.43
PVPPI-IPP5	Competent	.50
PVPPI-IPR1	Caring	.81
PVPPI-IPR2	Friendly	.64
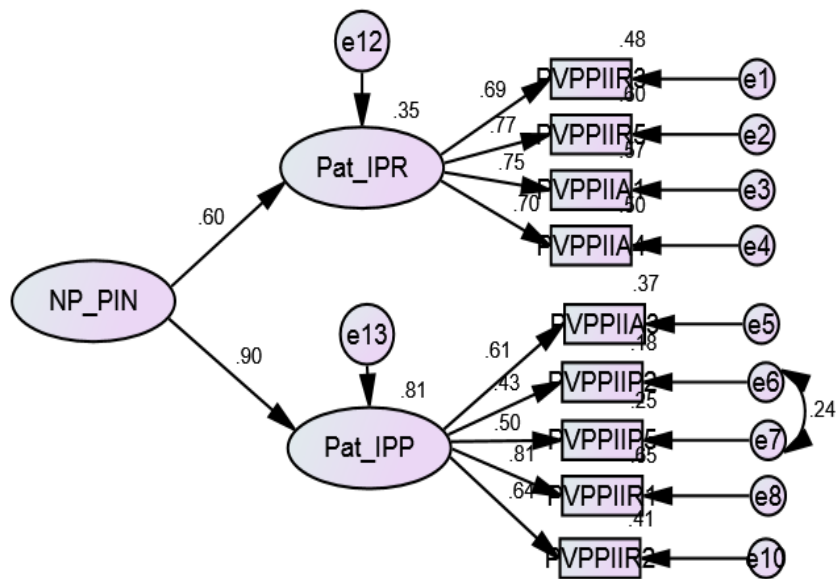
Figure 7.1b: Path diagram: Nurses' Perception about Patients' Image of Nurse (NP-PIN) Scale.

Table 7.7b : Model fit indices: Nurses' Perception about Patients' Image of Nurse (NP-PIN) Scale.

Model	C/df	P	GFI	AGFI	IFI	TLI	CFI	RMSEA	P CLOSE
NP-PIN	2.080	.000	.964	.935	.966	.951	.966	.060	.214

Ic.   Nurses' Perception about Other Hospital Staffs' Image of Nurse (NP-OHSIN) Scale.

Exploratory factor analysis of the construct "Nurses' perception about other hospital staffs' image of a nurse (NP-OHSIN)" yielded two dimensions consisting of five items each with good factor loadings. The Confirmatory factor analysis model of the two dimension construct with the retained items under the dimensions, the respective factor loadings and the model fit indices obtained are given below in Table 7.6c, Fig. 7.1c and Table 7.7c.

Table 7.6 c : CFA factor loadings: Nurses' Perception about Other Hospital Staffs' Image of Nurse (NP-OHSIN) Scale

Items		CFA Factor loadings
Inter-Personal Relation (OHS_IPR)		
OHVPPI-IPA1	Disorganised	.68
OHVPPI-IPR5	Uncooperative	.75
OHVPPI-IPA4	Dishonest	.71
OHVPPI-IPR3	Rude	.48
OHVPPI-IPP3	Unintelligent	.65
Inter-Personal Power (OHS_IPP)		
OHVPPI-IPR2	Friendly	.57
OHVPPI-IPR1	Caring	.80
OHVPPI-IPP5	Competent	.48
OHVPPI-IPP2	Confident	.52
OHVPPI-IPA3	Punctual	.50
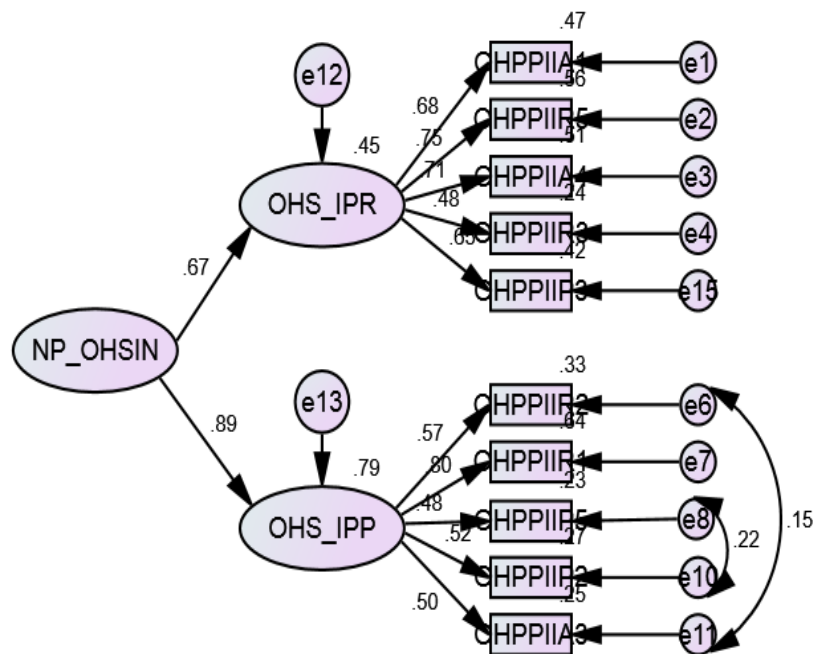
Figure 7.1c : Path diagram: Perception about Other Hospital Staffs' Image of Nurse (NP-OHSIN) Scale

Table 7.7c : Model fit indices: Perception about Other Hospital Staffs' Image of Nurse (NP-OHSIN) Scale

Model	C/df	P	GFI	AGFI	IFI	TLI	CFI	RMSEA	P CLOSE
NP-OHSIN	2.745	.000	.947	.909	.931	.901	.930	.077	.012

Nurses' Perceived Image of Nurse (NP-IN) Scale

Exploratory factor analysis of the "Nurses' perceived image of a nurse (NP-IN)" yielded two dimensions consisting of five and six items respectively with good factor loadings. In the confirmatory factor analysis model of the two dimension construct item "Logical-SVPPI-IPA2" is deleted due to low factor loading (<.45). The retained items under the dimensions with the respective factor loadings and the model fit indices obtained are given below in Table 7.6d, Fig 7.1d. and Table 7.7d.

Table 7.6d : CFA factor loadings: Perceived Image of Nurse (NP-IN) Scale

Items		CFA Factor loadings
Inter-Personal Relation (SV_IPR)		
SVPPI-IPA1	Disorganised	.81
SVPPI-IPR5	Uncooperative	.76
SVPPI-IPA4	Dishonest	.72
SVPPI-IPR3	Rude	.63
SVPPI-IPP3	Unintelligent	.54
Inter-Personal Power (SV_IPP)		
SVPPI-IPR1	Caring	.82
SVPPI-IPP5	Competent	.64
SVPPI-IPR4	Responsible	.64
SVPPI-IPP2	Confident	.71
SVPPI-IPA3	Punctual	.59
SVPPI-IPR2	Friendly	.62
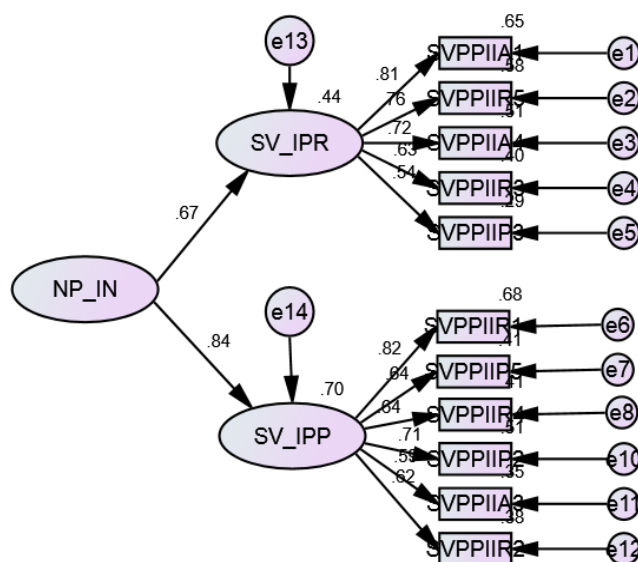
Fig. 7.1d : Path diagram: Nurses' Perceived Image of Nurse (NP-IN) Scale

Table 7.7d Model fit indices: Nurses' Perceived Image of Nurse (NP-IN) Scale

Model	C/df	P	GFI	AGFI	IFI	TLI	CFI	RMSEA	P CLOSE
NP-IN	1.795	.000	.954	.930	.971	.962	.970	.052	.416

II   Nurse Practice Environment Scale

"Nurse Practice Environment Scale (NPES)" consisting of 26 items was used for gathering data on the construct nurse practice environment in this study. The original 31 item standardised scale is widely used by other researchers to measure nurse practice environment. Exploratory factor analysis yielded two dimensions consisting of six and ten items respectively, with good factor loadings. The Confirmatory factor analysis model of the two dimension construct with the retained items, the respective factor loadings and the model fit indices obtained are given below in Table 7.8, Fig. 7. 2 and Table 7.9.

Table 7.8 : CFA factor loadings: Nurse Practice Environment Scale (NPES)

Items		CFA Factor loadings
Nurse Manager Ability, Leadership, and Support of Nurses		
NMALS1	The head nurse has good managerial and leadership ability	.77
NMALS2	The head nurse backs up the nursing staff in decision making, even if the conflict is with the physician.	.68
NMALS3	A head nurse is supportive of the nurses	.71
CNPTR1	Physicians and nurses have good team relationships	.60
FNQC5	I have opportunity to work with nurses who are clinically competent	.50
CNPTR2	There is a lot of teamwork between nurses and doctors	.59
Foundations for Nursing Quality of Care		
NPHA2	The administration listens and responds to staff on daily problems and procedures	.68
NPHA3	The matron is equal in power and authority to other top level hospital executives	.62
FNQC1	There is quality assurance program which helps in maintaining and improving quality of nursing care	.74
FNQC2	There is orientation program for newly hired nurses	.70
FNQC3	There is a clear philosophy of nursing that permeates the patient care environment	.72
FNQC4	There are in-service/continuing education programs for nurses	.55
FNQC7	There is clear description of nurses roles and responsibilities	.69
SRA1	There are sufficient registered nurses to provide quality patient care	.63
SRA2	There is sufficient time and opportunity to discuss patient care problems.	.64
SRA5	There is adequate time to consult other professionals if necessary	.59
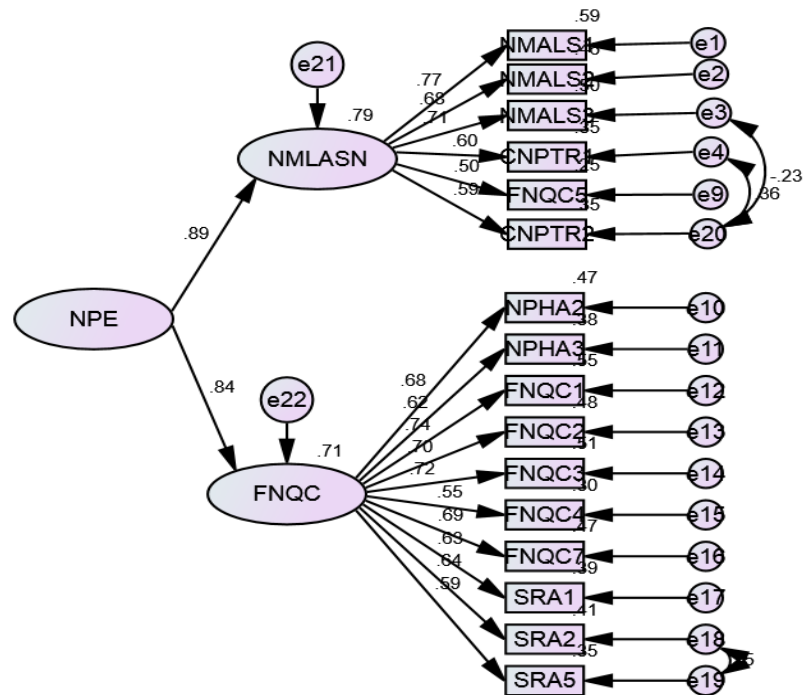
Fig. 7.2 : Path diagram: Nurse Practice Environment Scale (NPES)

Table 7.9 : Model fit indices: Nurse Practice Environment Scale (NPES)

Model	C/df	P	GFI	AGFI	IFI	TLI	CFI	RMSEA	P CLOSE
NPE	2.484	.000	.905	.871	.923	.907	.922	.071	.001

III. Emotional Intelligence Scale

Wong and Law Emotional Intelligence Scale (WLEIS. 2002) consisting of 16 items is adapted in this study to measure the emotional intelligence of nurses. Exploratory factor analysis yielded three dimensions consisting of four items each with good factor loadings. In the confirmatory factor analysis model, the item "I can always calm down quickly when I am very angry (ROE3)" is deleted due to low factor loading. The three dimensions construct with the retained items, the respective factor loadings and the model fit indices obtained are given below in Table 7.10, Fig 7.3 and Table 7.11.

Table 7.10 : CFA factor loadings: Emotional Intelligence (EI) Scale

Items		CFA Factor loadings
	Use of Emotion	
UOE1	I always use my emotions to sets goals for myself	.47
UOE2	I always use my emotions to tell myself that I am a competent person.	.47
UOE3	I use my emotions to be a self-motivated person	.67
UOE4	I always use my emotions to encourage myself to perform well.	.75
	Others Emotion Appraisal	
OEA2	I am a good observer of others' emotions.	.66
OEA4	I have good understanding of the emotions of people around me.	.63
OEA1	I always know my others' emotions from their behavior.	.59
SEA4	I always know whether or not I am happy	.60
	Regulation of Emotion	
ROE1	I am able to control my temper and handle difficulties rationally.	.57
SEA2	I have good understanding of my own emotions	.65
SEA3	I really understand what I feel.	.79
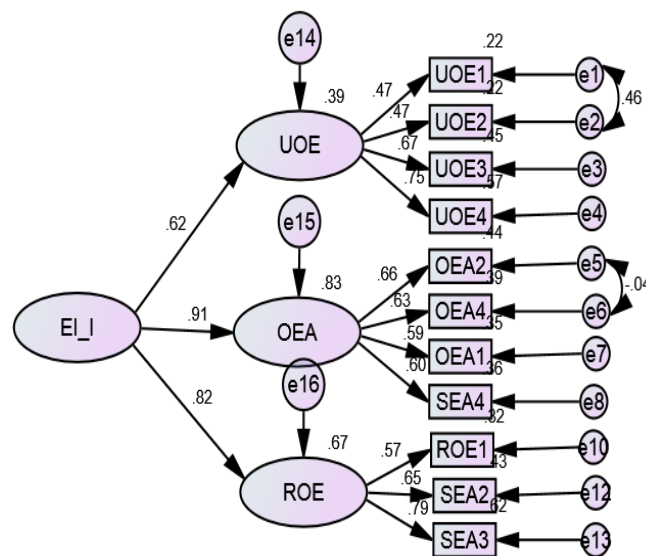
Fig. 7.3 : Path diagram: Emotional Intelligence (EI) Scale

Table 7.11 : Model fit indices: Emotional Intelligence (EI) Scale

Model	C/df	P	GFI	AGFI	IFI	TLI	CFI	RMSEA	P CLOSE
EI	1.942	.000	.957	.927	.957	.938	.956	.056	.274

IV Job Satisfaction Scale

The 20 MSQ-short version of the Minnesota Satisfaction Questionnaire (Weiss, Dawis, England and Lofquist. 1967) is used to measure job satisfaction among nurses in this study. Exploratory factor analysis yielded three dimensions consisting of four, five and three items respectively with good factor loadings. In the Confirmatory factor analysis model of the three dimension construct, the item "Being able to do things that don't go against your conscience (IJS5)" is deleted due to low factor loading (<.4). The retained items with the respective factor loadings and the model fit indices obtained are given below in Table 7.12, Fig.7.4 and Table 7.13.

Table 7.12 : CFA factor loadings: Job Satisfaction Scale

Items		CFA Factor loadings
	Freedom on the Job	
IJS10	The freedom to use your own judgment	.72
IJS11	The chance to try your own methods of doing the job	.66
IJS3	The chance to do different things from time to time.	.71
EJS5	The chances for advancement on this job.	.62
	Social Service	
EJS6	The praise you get for doing a good job.	.60
IJS7	The chance to do things for other people.	.61
IJS4	The chance to be somebody in the community	.47
IJS8	The chance to tell people what to do.	.49
IJS9	The chance to do something that makes use of your abilities.	.65
	Job Security	
IJS6	The way your job provides for steady employment.	.74
EJS4	Your pay and the amount of work you do.	.59
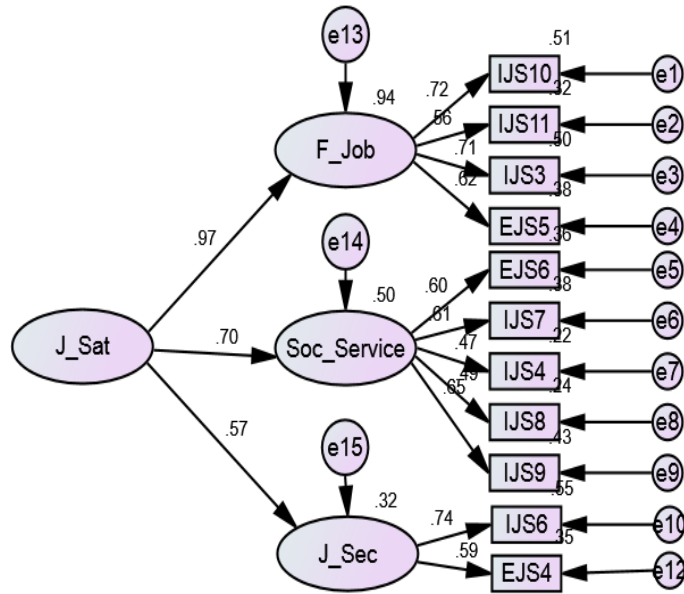
Fig. 7.4 : Path diagram: Job Satisfaction Scale

Table 7.13 : Model fit indices: Job Satisfaction Scale

Model	C/df	P	GFI	AGFI	IFI	TLI	CFI	RMSEA	P CLOSE
J-SAT	1.612	.000	.962	.939	.964	.951	.963	.045	.626

V   Nurse Professionalism Scale

Exploratory factor analysis yielded five dimensions consisting of five, four, four, three and two items respectively with satisfactory factor loadings. The Confirmatory factor analysis model of the five-dimension construct with the retained items, the respective factor loadings and the model fit indices obtained are given below in Table 7.14, Fig. 7.5 and Table 7.15.

Table 7.14 : CFA factor loadings: Nurse Professionalism Scale (NPS)

	Items	Factor loadings
	Management (Man)	
Man3	I use judgment in relation to individual competence while delegating responsibility to colleagues, patients and relatives.	.51
Man4	I facilitate conducive work culture in order to achieve patient care objectives.	.64
VHB2	I consider relevant facts while taking decisions in the best interest of patients.	.69
PA1	I take responsibility for updating my own knowledge and competencies.	.58
PA4	I ensure the protection of the human rights while pursuing the advancement of knowledge.	.63
	Professional Advancement (ProfAdv)	
Man8	I participate in policy decisions related to patient care services.	.65
Man9	I work with patients to identify their needs and sensitize policy makers and funding agencies for resource allocation.	.49
PA2	I contribute to the development of nursing practice.	.62
PA5	I contribute to core of professional knowledge by conducting and participating in research.	.67
	Nurse Practice (NP)	
PA3	I participate in determining and implementing quality care.	.62
CIR1	I establish and maintain effective interpersonal relationships with patients and their significant others.	.48
PRA2	I maintain standards of conduct/practice which add to the respect/status of the profession.	.41
PRA7	I take responsibility for continuous improvement of current nursing care practices.	.49
	Professional Responsibility and Authority (ProfRA)	
PRA3	I carry out nursing responsibilities within the framework of professional boundaries.	.61
PRA5	I accept accountability for my own decisions and actions.	.48
Man1	I ensure appropriate allocation and utilization of available resources.	.60
	Value for Human Being (VHB)	
VHB1	I take appropriate action to protect patients from harmful and unethical practice.	.52
VHB3	I encourage and support patients in their right to speak for themselves on issues affecting their health and welfare.	.43
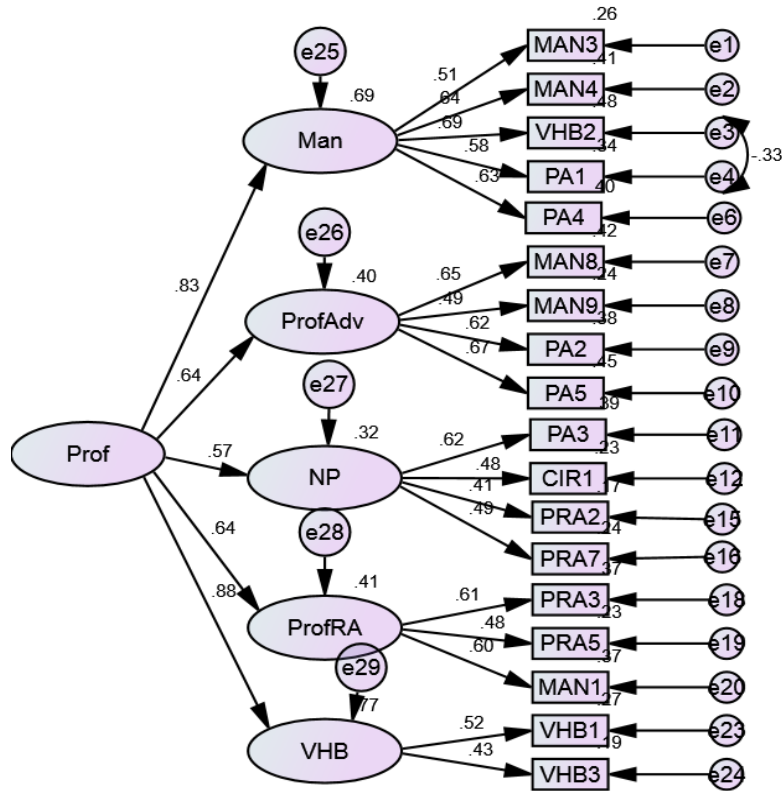
Fig. 7.5 : Path diagram: Nurse Professionalism Scale (NPS)

Table 7.15 Model fit indices: Nurse Professionalism Scale (NPS)

Model	C/df	P	GFI	AGFI	IFI	TLI	CFI	RMSEA	P CLOSE
NPS	1.747	.000	.926	.901	.901	.879	.899	.050	.476

7.4 MEASUREMENT MODEL VALIDITY AND CONSTRUCT RELIABILITY

Measurement model validity is estimated based on acceptable values of the model fit indices and the evidence of construct validity. Model fit measures indicate the comparison of estimated covariance matrix with the observed covariance matrix. The closer the values of the two matrices, better is the fit of the model. In this study, the construct nurses' perception about stakeholders' image of a nurse is captured from registered nurse in the context of four different stakeholders, Nurses' Perception about Doctors' Image of a Nurse (NP-DIN), Nurses' Perception about Patients' Image of a Nurse (NP-PIN), Nurses' Perception about Other Hospital staffs' Image of a Nurse (NP-OHSIN) and Nurses' Perceived Image of a Nurse (NP-IN). Hence the data is also presented in four different measurement models. The fit indices of the measurement model developed in this study are within acceptable values. The measurement models and the corresponding fit indices are presented in Fig. 7.6a-7.6d and Table 7.16.
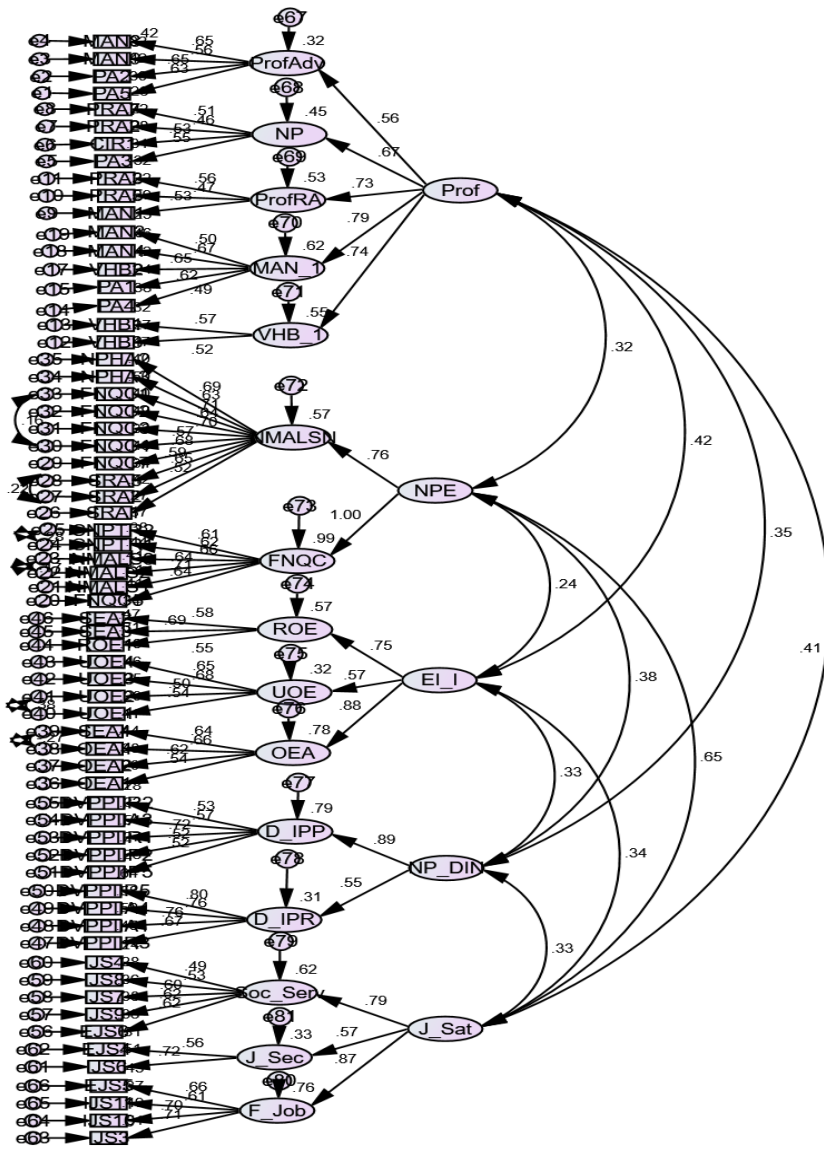
Fig 7.6 a : Measurement model with construct "Nurses' Perception about Doctors' Image of Nurse (NP-DIN)"
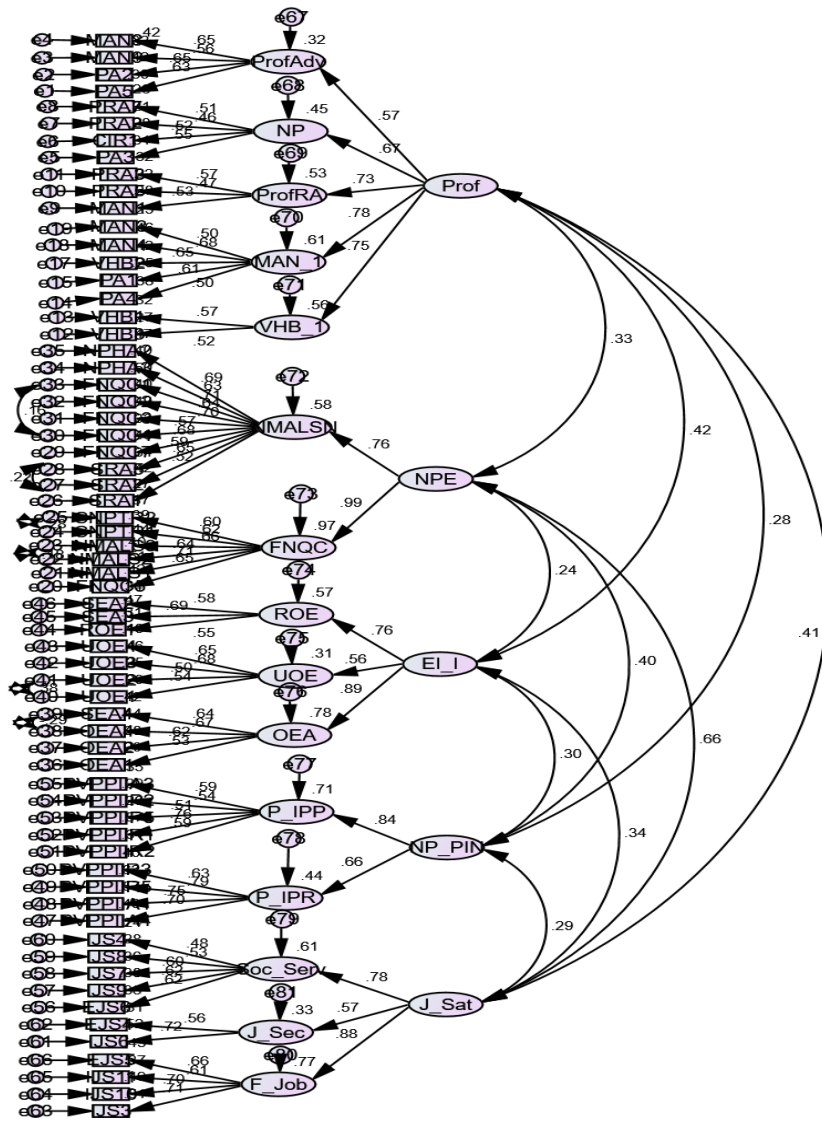
Fig 7.6b : Measurement model with construct "Nurses' Perception about Patients' Image of Nurse (NP-PIN)"
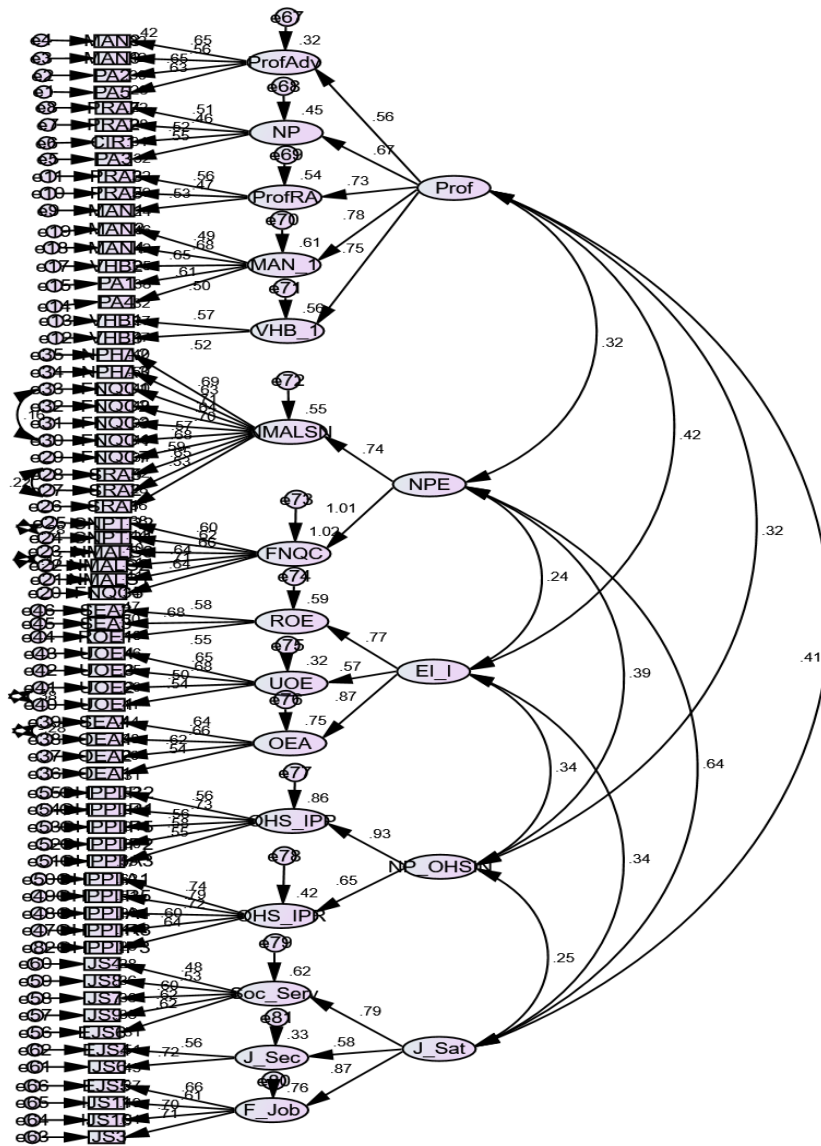
Fig 7.6c : Measurement model with construct "Nurses' Perception about Other Hospital Staffs' Image of Nurse (NP-OHSIN)"

Fig 7.6d : Measurement model with construct "Nurses' Perceived Image of Nurse (NP-IN)"

Table 7.16 : Model fit indices for the four measurement models

Model	C/df	P	GFI	AGFI	IFI	TLI	CFI	RMSEA	P CLOSE
NP-DIN	1.871	.000	.865	.854	.876	.869	.875	.034	1.000
NP-PIN	1.951	.000	.858	.847	.865	.858	.865	.036	1.000
NP-OHSIN	1.895	.000	.859	.848	.871	.865	.871	.035	1.000
NP-IN	1.864	.000	.861	.850	.876	.870	.875	.034	1.000

Construct Validity

Construct validity refers to the degree to which the latent constructs are actually represented by a set of measured variables that were designed to measure the specific latent constructs. Convergent validity refers to the degree to which the indicators/variables of a specific construct share a high amount of variance in common. The square of the standardized factor loadings shows the extent of variation in an item that is explained by a latent factor. This is referred to as the variance extracted of that item. The average variance extracted (AVE) is the calculated mean variance extracted for the item loadings on a construct that indicates convergence. The acceptable value of AVE of a construct is 0.5 (Hair, Black, Babin, & Anderson, 2010). In this study, the AVE values of all the constructs exceed 0.50, indicating acceptable levels of convergent validity of constructs as indicated in Table 7.17.

Discriminant validity refers to the degree to which a construct is really distinct from other constructs in terms of the extent to which it correlates with other constructs as well as the extent to which the measured variables represent a single construct. In CFA, discriminant validity is accurately assessed by comparing the average variance extracted (AVE) values for any two constructs and the square of corresponding correlation estimate or the mean shared variance (MSV) between the two constructs. AVE values greater than the estimated squared correlation or MSV values indicate good discriminant validity (Hair, Black, Babin, & Anderson, 2010). In this study, table 7.17 shows that the MSV estimates of all the constructs are below the AVE values and the diagonal values specify that the AVE square root of the particular constructs is greater than the (its) correlations with all other constructs, thus exhibiting satisfactory discriminant validity between constructs.

Construct Reliability

Construct Reliability (CR) refers to the degree to which the set of indicators/variables representing the latent construct are internally consistent and reliable on their measurement. When the variables measuring a constructs are highly interrelated indicating that they measure the same construct, the construct is considered as highly reliable. It can be considered as an indicator of convergent validity also. Reliability estimates of greater than or equal to 0.7 indicate good reliability, although value of 0.6 is also acceptable provided the other indicators of the model construct validity are satisfactory. Also the AVE of the construct should be less than the construct reliability (Hair, Black, Babin, & Anderson, 2010). In Table 7.17, it is shown that all the values of CR are greater than the AVE and are above 0.7, except the CR for the construct "Nurses' perception about doctors' image of a nurse" (NP-DIN = 0.696).

Table 7.17 : Convergent and Discriminant Validity and Construct Reliability

	CR	AVE	MSV	MaxR(H)	NPE	Prof	J_Sat	NP-DIN	EI
NPE	0.875	0.781	0.426	0.994	**0.884**				
Prof	0.834	0.505	0.176	0.851	0.320	**0.710**			
J_Sat	0.795	0.570	0.426	0.840	0.653	0.404	**0.755**		
NP-DIN	0.696	0.547	0.145	0.805	0.381	0.356	0.333	**0.739**	
EI	0.785	0.556	0.176	0.841	0.242	0.420	0.344	0.329	**0.746**

	CR	AVE	MSV	MaxR(H)	NPE	Prof	J_Sat	NP-PIN	EI
NPE	0.873	0.778	0.437	0.971	**0.882**				
Prof	0.834	0.505	0.176	0.849	0.325	**0.711**			
J_Sat	0.795	0.570	0.437	0.843	0.661	0.403	**0.755**		
NP-PIN	0.744	0.599	0.145	0.829	0.381	0.276	0.273	**0.774**	
EI	0.784	0.556	0.176	0.844	0.244	0.420	0.341	0.287	**0.745**

	CR	AVE	MSV	MaxR(H)	NP-OHSIN	Prof	J_Sat	EI	NPE
NP-OHSIN	0.777	0.647	0.152	0.936	**0.804**				
Prof	0.834	0.505	0.178	0.850	0.320	**0.711**			
J_Sat	0.795	0.570	0.417	0.840	0.256	0.403	**0.755**		
EI	0.785	0.556	0.178	0.836	0.321	0.422	0.344	**0.745**	
NPE	0.877	0.785	0.417	1.016	0.390	0.316	0.646	0.238	**0.886**

	CR	AVE	MSV	MaxR(H)	NPE	Prof	J_Sat	NP-IN	EI
NPE	0.880	0.789	0.411	1.034	**0.888**				
Prof	0.833	0.504	0.176	0.852	0.313	**0.710**			
J_Sat	0.795	0.570	0.411	0.838	0.641	0.404	**0.755**		
NP-IN	0.774	0.640	0.088	0.880	0.240	0.251	0.198	**0.800**	
EI	0.785	0.555	0.176	0.832	0.235	0.420	0.346	0.297	**0.745**

7.5   TESTING STRUCTURAL MODEL AND THE HYPOTHESIZED RELATIONSHIPS

This section deals with the testing of structural models wherein the main focus is to test the relationships between constructs. The structural models are developed using AMOS software. The relationships are examined using the output of path analysis provided by AMOS. IBM AMOS implements SEM for data analysis and accepts the path diagram as model specification. SEM provides empirical examination of the theoretical model by involving the measurement as well as the structural model in a single analysis. Structural model links the hypothesized constructs in the model and provides representation of interrelationships between constructs. It represents the theory with structural equations and provides graphical display of parameter estimates on the path diagram (Hair, Black, Babin, & Anderson, 2010).

The transition to the structural model from a measurement model follows the application of a structural theory that serves as a base for the relationships among constructs. Measurement model depicts all the constructs under study without representing a causal or co-relational relationship among the constructs. However, the structural model uses the structural theory that specifies the relation and the nature of the relationship between the constructs (Hair, Black, Babin, & Anderson, 2010). In this study, the structural model is developed using the concepts from social cognitive theory, which explains the dynamic relationship between the personal determinant (Emotional Intelligence - EI), the social environmental determinant (nurses perception about stakeholders' image of a nurse – NP-SIN) which is captured with reference to four different stakeholders; "Nurses' perception about doctors' image of a nurse (NP-DIN)", "Nurses' perception about patients' image of a nurse (NP-PIN)", "Nurses' perception about other hospital staffs' image of a nurse (NP-OHSIN)", "Nurses'

perceived image of a nurse (NP-IN)", physical environmental determinant, (Nurse Practice Environment - NPE) and behaviour (Professionalism - Prof). The relationships are explained in four different models wherein all the other constructs remain common; accept for the "nurses perception about stakeholders' image of a nurse". The interaction effects of the determinants on professionalism are explored using two way interaction method as well as group differences method. This study also aims at identifying the mediating effects of job satisfaction (J_Sat) in the relationship between the determinants and the professionalism behaviours of nurses. The moderating influence of the various demographic variables is tested by means of the chi square/degree of freedom difference test in AMOS. The influence of the determinants on job satisfaction is also tested in this study.

7.5.1   Influence of Determinants on Professionalism

Objective 2: To identify the influence of the personal and environmental determinants on professionalism among nurses.

H2	Nurses' perception about the stakeholders' image of a nurse positively influences professionalism among nurses.
H2a	Nurses' perception about doctors' image of a nurse (NP-DIN) positively influences professionalism among nurses
H2b	Nurses' perception about patients' image of a nurse image (NP-PIN) positively influences professionalism among nurses.
H2c	Nurses' perception about other hospital staffs' image of a nurse (NP-OHSIN) positively influences professionalism among nurses
H2d	Nurses' perceived image of a nurse (NP-IN) positively influences professionalism among nurses.
H3a-H3d	Nurse practice environment positively influences professionalism among nurses.
H4a- H4d	Emotional intelligence positively influences professionalism among nurses.

The influence of personal and environmental determinants on professionalism among nurses is shown in the structural models in Figures 7.7a - 7.7d respectively. Also the model fit indices are found to be within acceptable range as shown in Tables

7.18a – 7.18d. Hence the model is used to explain the hypothesized relationships as shown in Tables 7.19a -7.19d.

Fig. 7.7a : Structural Model depicting the influence of determinants (NP-DIN, NPE, EI) on Professionalism among nurses. (Model a)

Table 7.18a : Fit indices for the structural model a (NP-DIN, NPE and EI and Professionalism among nurses)

NPAR	C/df	GFI	AGFI	IFI	TLI	CFI	RMSEA	P CLOSE
130	1.891	.885	.874	.894	.888	.894	.035	1.000

Table 7.19a : Influence of determinants (model a) on Professionalism:

Regression output and hypothesis testing

Relationship	Standar-dised Reg. Weights	Estimate	SE	CR	P	Significance	Remarks
H2a Prof <-- NP_DIN	0.172	0.239	.091	2.625	0.009	**Significant**	**Supported**
H3a Prof <-- NPE	0.194	0.146	.044	3.330	***	**Significant**	**Supported**
H4a Prof <-- EI	0.315	0.487	.106	4.608	***	**Significant**	**Supported**

Note: * represents 10%, ** represent 5% and *** represent 1% level of significance.

"Nurses' perception about doctors' image of a nurse", nurse practice environment and emotional intelligence have significant positive influence on professionalism among nurses, thus H2a, H3a and H4a are supported. The findings indicate that with a unit increase in the "nurses' perception about doctors' image of a nurse", nurses' professionalism will increase by .239 at p<0.009, similarly, as the nurse practice environment goes up by one, nurses' professionalism will increase by .146 at p<0.001, and when nurses' emotional intelligence goes up by one unit, their professionalism will improve by .487 at p<0.001.

Fig. 7.7b : Structural Model depicting the influence of determinants (NP-PIN, NPE, EI) on Professionalism among nurses (Model b)

Table 7.18b : Fit indices for the structural model b (NP-PIN, NPE and EI and Professionalism among nurses)

NPAR	C/df	GFI	AGFI	IFI	TLI	CFI	RMSEA	P CLOSE
131	1.989	.878	.866	.884	.877	.883	.036	1.000

Table 7.19b : Influence of determinants (NP-PIN, NPE and EI) on Professionalism: Regression output and hypothesis testing

Relationship	Standar-dised Reg. Weights	Estimate	SE	CR	P	Significance	Remarks
H2b Prof<-- P_PIN	.093	.106	.072	1.486	.137	Not Significant	Not Supported
H3b Prof <--- NPE	.220	.163	.045	3.640	***	**Significant**	**Supported**
H4b Prof <--- EI	.337	.526	.108	4.869	***	**Significant**	**Supported**

Note: * represents 10%, ** represent 5% and *** represent 1% level of significance.

Nurse practice environment and emotional intelligence have significant positive influence on professionalism among nurses, thus, H3b and H4b are supported. The findings indicate that with a unit increase in the nurse practice environment, nurses' professionalism will increase by .163 at p<0.001, and when nurses' emotional intelligence goes up by one unit, their professionalism will improve by .526 at p<0.001.

However, "nurses' perception about patients' image of a nurse" does not have a significant influence on professionalism among nurses thus H2b is not supported.

Fig. 7.7c : Structural Model depicting the influence of determinants (NP-OHSIN, NPE, EI) on Professionalism among nurses (Model c)

Table 7.18c : Fit indices for the structural model c (NP-OHSIN, NPE and EI and Professionalism among nurses)

NPAR	C/df	GFI	AGFI	IFI	TLI	CFI	RMSEA	P CLOSE
132	1.929	.877	.865	.889	.882	.888	.035	1.000

Table 7.19c : Influence of determinants (NP-OHSIN, NPE and EI) on Professionalism: Regression output and hypothesis testing

Relationship	Standardised Reg. Weights	Estimate	SE	CR	P	Significance	Remarks
H2c		.159	.076	2.089		**Significant**	**Supported**
Prof<-- NP_OHSIN	.128				.037		
H3c		.155	.045	3.450		**Significant**	**Supported**
Prof <-- NPE	.196				***		
H4c		.502	.106	4.736		**Significant**	**Supported**
Prof <-- EI	.332				***		

Note: * represents 10%, ** represent 5% and *** represent 1% level of significance.

"Nurses' perception about other hospital staffs' image of a nurse", nurse practice environment and emotional intelligence have significant positive influence on professionalism among nurses, thus H2c, H3c and H4c are supported. The findings indicate that with a unit increase in the "nurses' perception about other hospital staffs' image of a nurse", nurses' professionalism will increase by .159 at $p<0.037$, similarly, as the nurse practice environment goes up by one, nurses' professionalism will increase by .155 at $p<0.001$, and when nurses' emotional intelligence goes up by one unit, their professionalism will improve by .502 at $p<0.001$.

Fig. 7.7d : Structural Model depicting the influence of determinants (NP-IN, NPE, EI) on Professionalism among nurses (Model d)

Table 7.18d : Fit indices for the structural model d (NP-IN, NPE and EI and Professionalism among nurses).

NPAR	C/df	GFI	AGFI	IFI	TLI	CFI	RMSEA	P CLOSE
134	1.890	.880	.869	.894	.887	.893	.035	1.000

Table 7.19d : Influence of determinants (NP-IN, NPE and EI) on

Professionalism: Regression output and hypothesis testing

Relationship	Standardised Reg. Weights	Estimate	SE	CR	P	Significance	Remarks
H2d Prof<-- NP_IN	.089	.117	.071	1.641	.101	Not Significant	Not Supported
H3d Prof <-- NPE	.227	.177	.043	4.075	***	**Significant**	**Supported**
H4d Prof <-- EI	.339	.509	.105	4.829	***	**Significant**	**Supported**

Note: * represents 10%, ** represent 5% and *** represent 1% level of significance.

Nurse practice environment and emotional intelligence have significant positive influence on professionalism among nurses, thus, H3d and H4d are supported. The findings indicate that with a unit increase in the nurse practice environment, nurses' professionalism will increase by .177 at $p<0.001$, and when nurses' emotional intelligence goes up by one unit, their professionalism will improve by .509 at $p<0.001$.

However, "nurses' perceived image of a nurse" does not have significant influence on professionalism among nurses thus H2d is not supported.

Models in Figures 7.7a-7.7d, Tables 7.18a-7.18d and the findings as indicated by the standardised regression weights in Tables 7.19a-7.19d signify that emotional intelligence has the greatest influence on professionalism among nurses followed by nurse practice environment and "Nurses' perception about doctors' image of a nurse" and "Nurses' perception about other hospital staffs' image of a nurse" respectively.

7.5.2 Influence of Determinants on Job Satisfaction

Objective 3: To identify the influence of the personal and environmental determinants on job satisfaction among nurses.

H5	Nurses' perception about the stakeholders' image of a nurse positively influences job satisfaction among nurses.
H5a	Nurses' perception about doctors' image of a nurse (NP-DIN) positively influences job satisfaction among nurses

H5b	Nurses' perception about patients' image of a nurse image (NP-PIN) positively influences job satisfaction among nurses.
H5c	Nurses' perception about other hospital staffs' image of a nurse (NP-OHSIN) positively influences job satisfaction among nurses
H5d	Nurses' perceived image of a nurse (NP-IN) positively influences job satisfaction among nurses.
H6a-H6d	Nurse practice environment positively influences job satisfaction among nurses
H7a- H7d	Emotional intelligence positively influences job satisfaction among nurses.

The influence of personal and environmental determinants on job satisfaction among nurses is shown in the structural models in Figures 7.8a - 7.8d respectively. Also the model fit indices are found to be within acceptable range as shown in Tables 7.20a – 7.20d. Hence the model is used to explain the hypothesized relationships as shown in Tables 7.21a -7.21d.
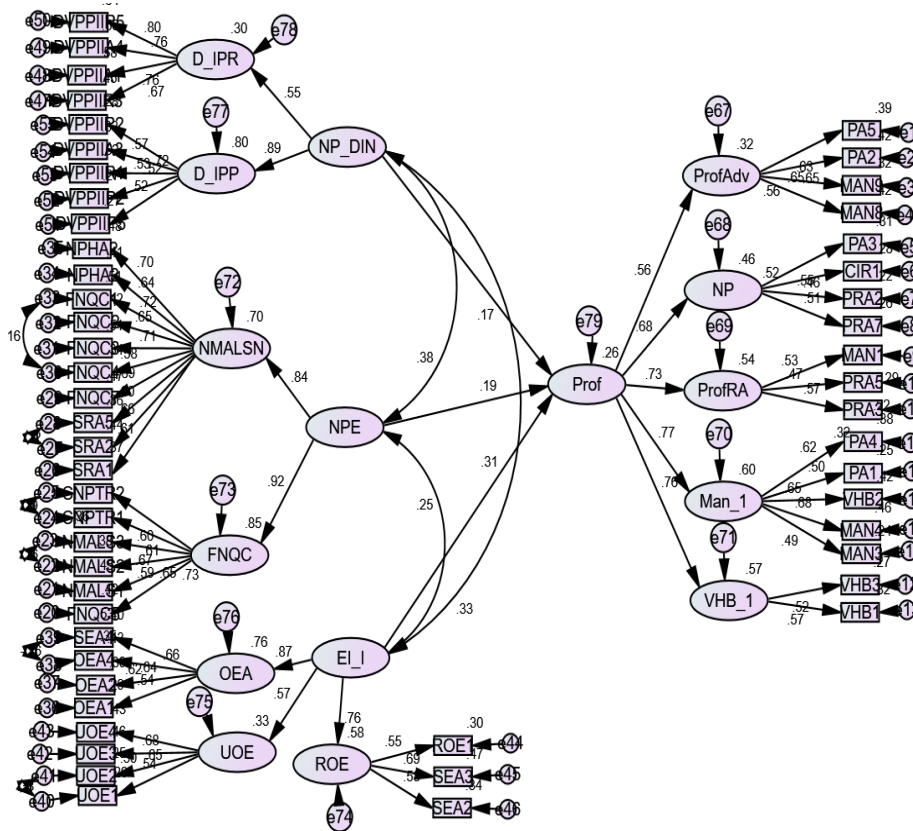
Fig. 7.8a : Structural Model depicting the influence of determinants (NP-DIN, NPE, EI) on Job satisfaction among nurses. (Model a)

Table 7.20a : Fit indices for the structural model a (NP-DIN, NPE and EI and Job Satisfaction among nurses)

NPAR	C/df	GFI	AGFI	IFI	TLI	CFI	RMSEA	P CLOSE
118	2.018	.895	.883	.907	.900	.906	.037	1.000

Table 7.21a : Influence of determinants (NP-DIN, NPE and EI) on Job Satisfaction: Regression output and hypothesis testing

Relationship	Standardised Reg. Weights	Estimate	SE	CR	P	Significance	Remarks
H5a J_Sat <-- NP_DIN	.031	.037	.066	.554	.579	Not Significant	Not Supported
H6a J_Sat <--NPE	.628	.399	.048	8.290	***	**Significant**	**Supported**
H7a J_Sat <-- EI	.156	.205	.069	2.980	**.003**	**Significant**	**Supported**

Note: * represents 10%, ** represent 5% and *** represent 1% level of significance.

Nurse practice environment and emotional intelligence have significant positive influence on the job satisfaction among nurses, thus H6a and H7a are supported. The findings indicate that with a unit increase in the nurse practice environment, nurses' job satisfaction will increase by .399 at $p<0.001$, similarly when nurses' emotional intelligence goes up by a unit, job satisfaction will improve by .205 at $p<0.003$.

However, "nurses' perception about doctors' image of a nurse" does not have significant influence on the job satisfaction among nurses, thus H5a is not supported.
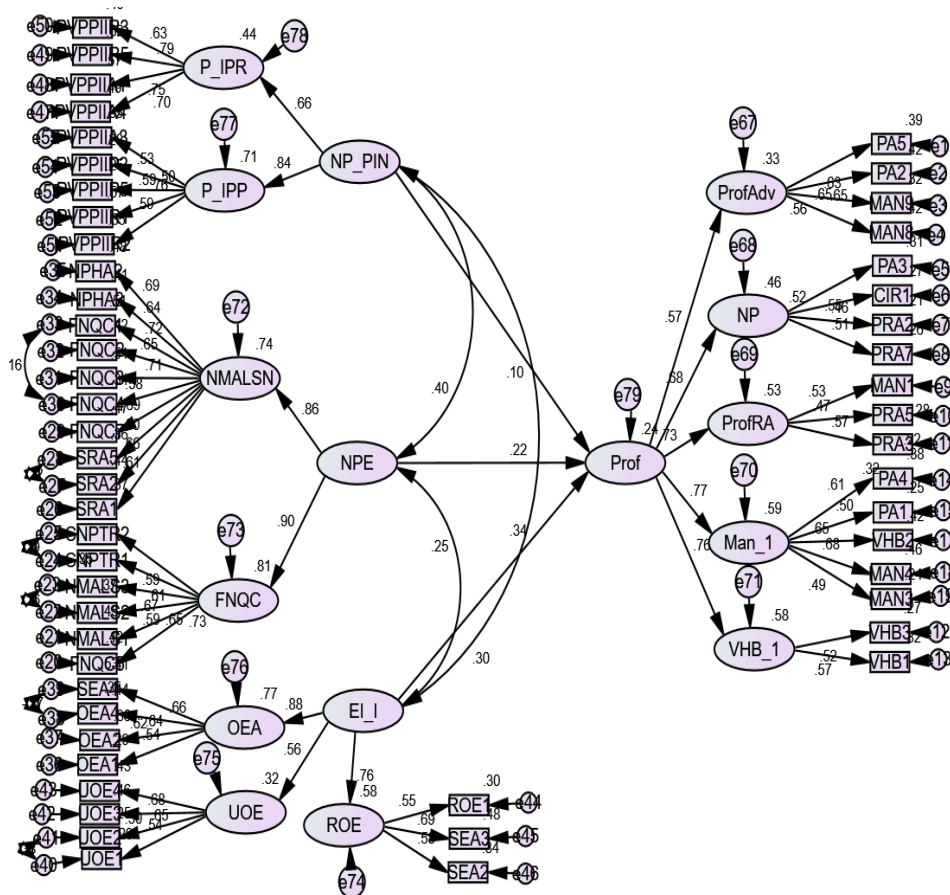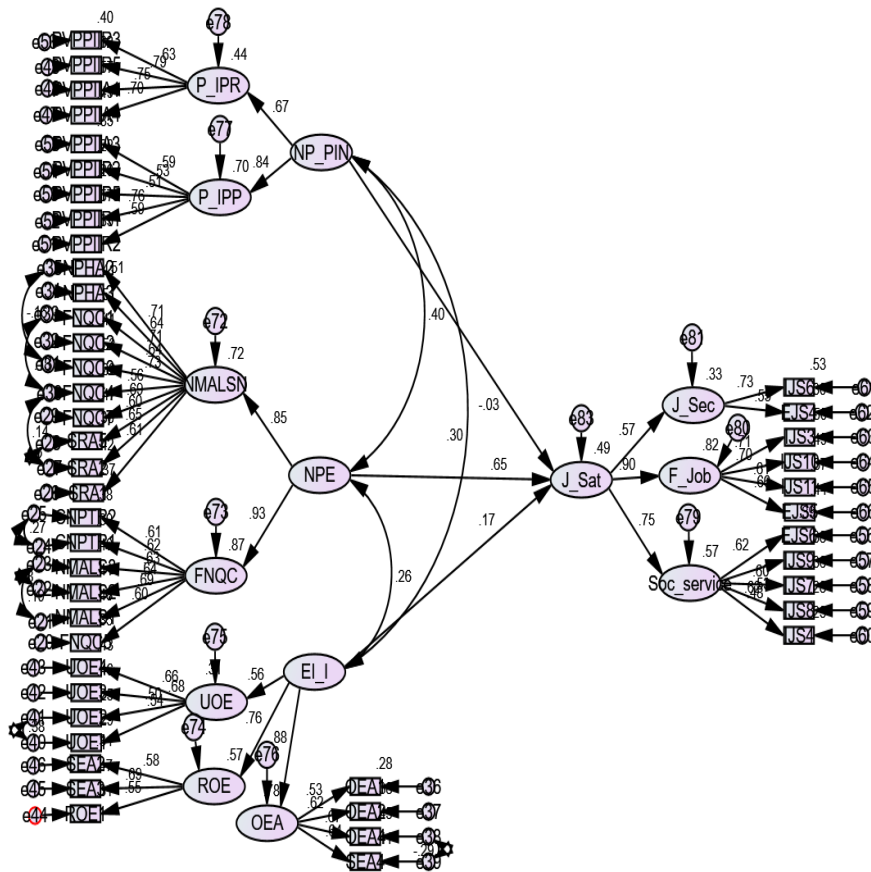
Fig. 7.8b : Structural Model depicting the influence of determinants (NP-PIN, NPE, EI) on Job Satisfaction among nurses (Model b)

Table 7.20b : Fit indices for the structural model b (NP-PIN, NPE and EI and Job Satisfaction among nurses)

NPAR	C/df	GFI	AGFI	IFI	TLI	CFI	RMSEA	P CLOSE
118	2.159	.887	.874	.895	.887	.895	.039	1.000

Table 7.21b : Influence of determinants (NP-PIN, NPE and EI) on Job Satisfaction: Regression output and hypothesis testing

Relationship	Standar-dised Reg. Weights	Estimate	SE	CR	P	Significance	Remarks
H5b J_Sat <-NP_PIN	-.031	-.031	.055	-.567	.571	Not Significant	Not Supported
H6b J_Sat <--NPE	.650	.406	.049	8.334	***	**Significant**	**Supported**
H7b J_Sat <--- EI	.169	.220	.068	3.253	.001	**Significant**	**Supported**

Note: * represents 10%, ** represent 5% and *** represent 1% level of significance.

Nurse practice environment and emotional intelligence have significant positive influence on the job satisfaction among nurses, thus H6b and H7b are supported. The findings indicate that with a unit increase in the nurse practice environment, nurses' job satisfaction will increase by .406 at p<0.001, similarly when nurses' emotional intelligence goes up by a unit; their job satisfaction will improve by .220 at p<0.001.

However, "nurses' perception about patients' image of a nurse" does not have significant influence on the job satisfaction among nurses, thus H5b is not supported.
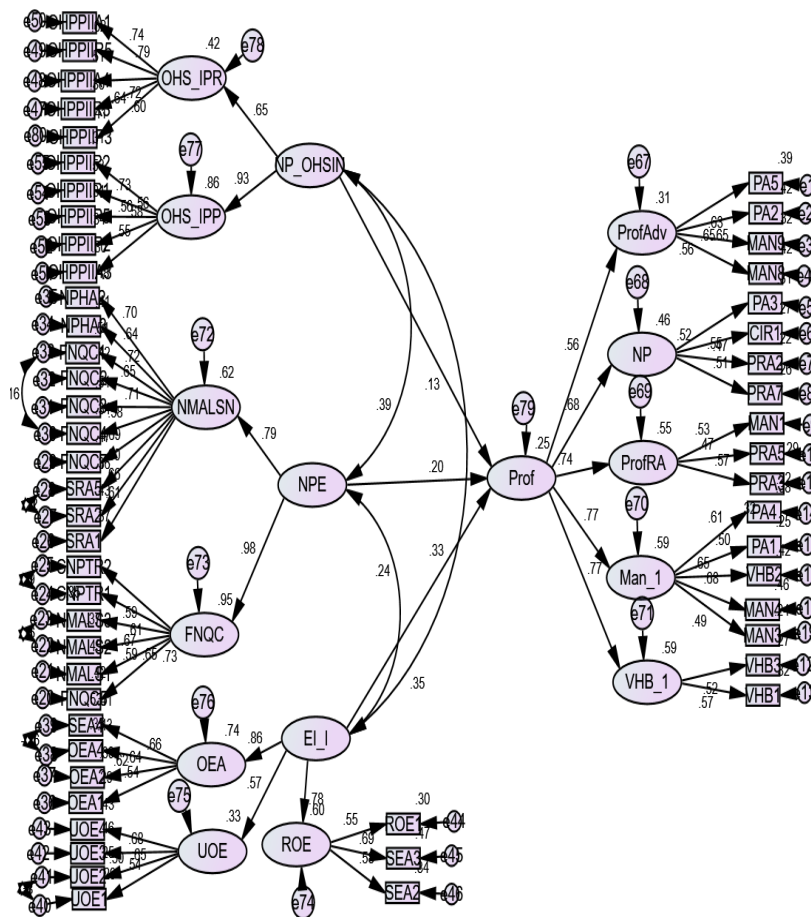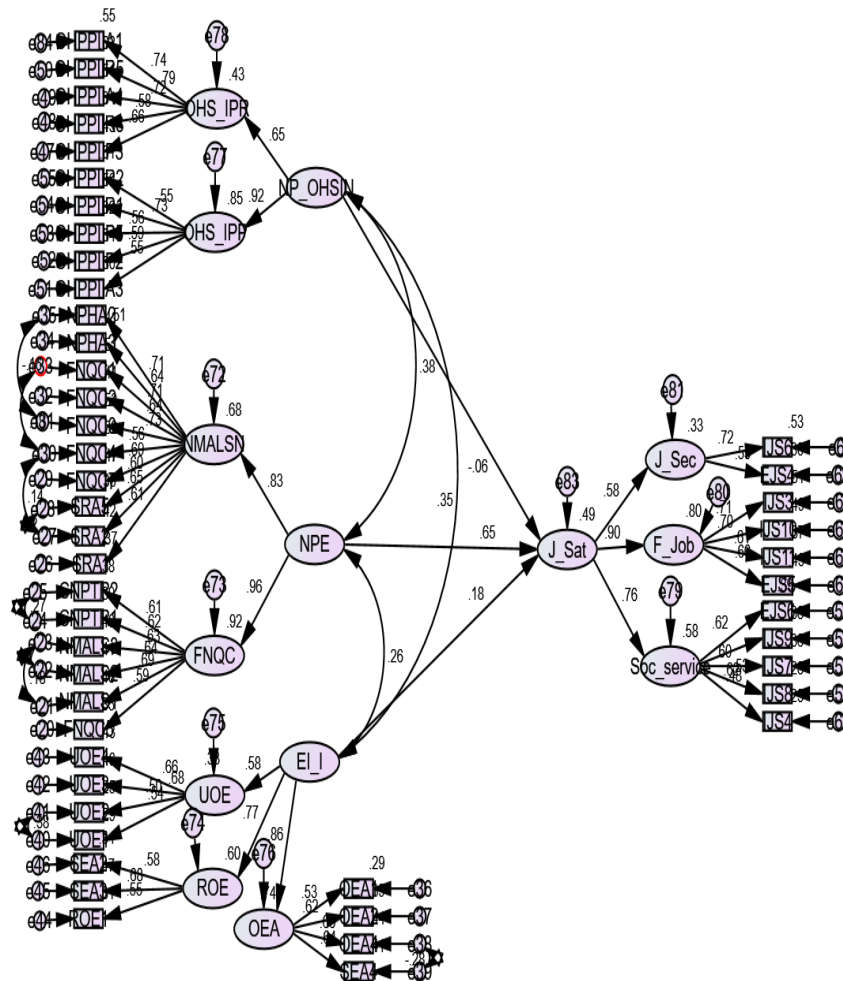
Fig. 7.8c : Structural Model depicting the influence of determinants (NP-OHSIN, NPE, EI) on Job Satisfaction among nurses (Model c)

Table 7.20c : Fit indices for the structural model c (NP-OHSIN, NPE and EI and Job Satisfaction among nurses)

NPAR	C/df	GFI	AGFI	IFI	TLI	CFI	RMSEA	P CLOSE
120	2.088	.887	.874	.899	.892	.899	.038	1.000

Table 7.21c : Influence of determinants (NP-OHSIN, NPE and EI) on Job Satisfaction: Regression output and hypothesis testing

Relationship	Standar-dised Reg. Weights	Estimate	SE	CR	P	Significance	Remarks
H5c J_Sat <-- NP_OHSIN	-.062	-.061	.050	-1.22	.222	Not Significant	Not Supported
H6c J_Sat <--- NPE	.654	.406	.049	8.490	***	**Significant**	**Supported**
H7c J_Sat <--- EI	.182	.220	.068	3.395	***	**Significant**	**Supported**

Note: * represents 10%, ** represent 5% and *** represent 1% level of significance.

Nurse practice environment and emotional intelligence have significant positive influence on the job satisfaction among nurses, thus H6c and H7c are supported. The findings indicate that with a unit increase in the nurse practice environment, nurses' job satisfaction will increase by .406 at p<0.001, similarly when nurses' emotional intelligence goes up by a unit, their job satisfaction will improve by .220 at p<0.001.

However, "nurses' perception about other hospital staffs' image of a nurse" does not have significant influence on the job satisfaction among nurses, thus H5c is not supported.
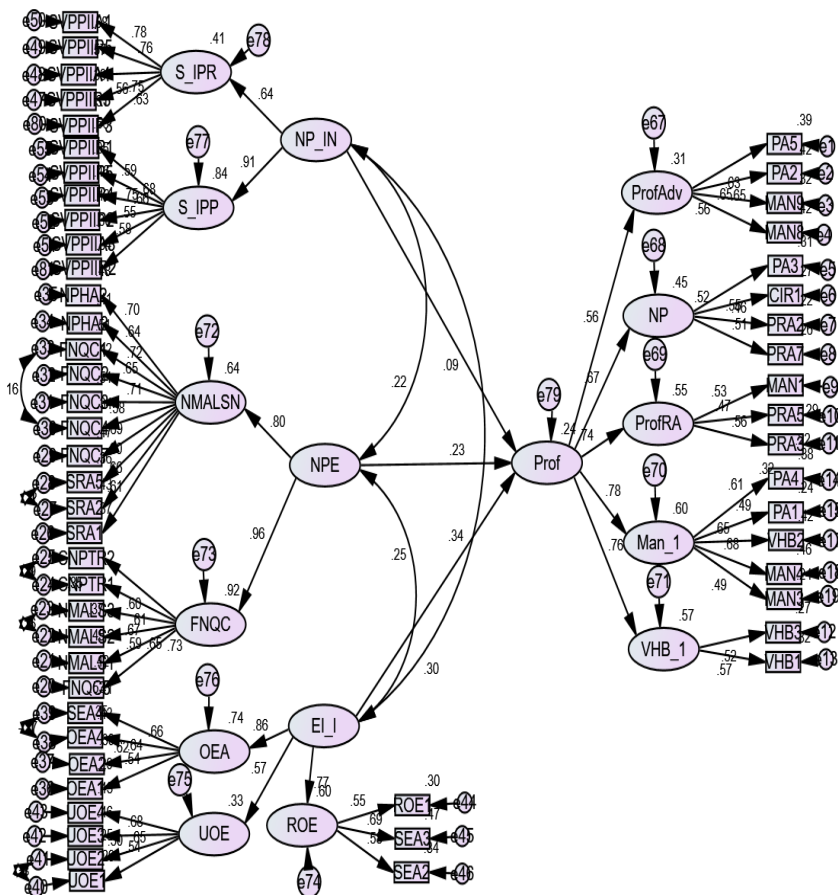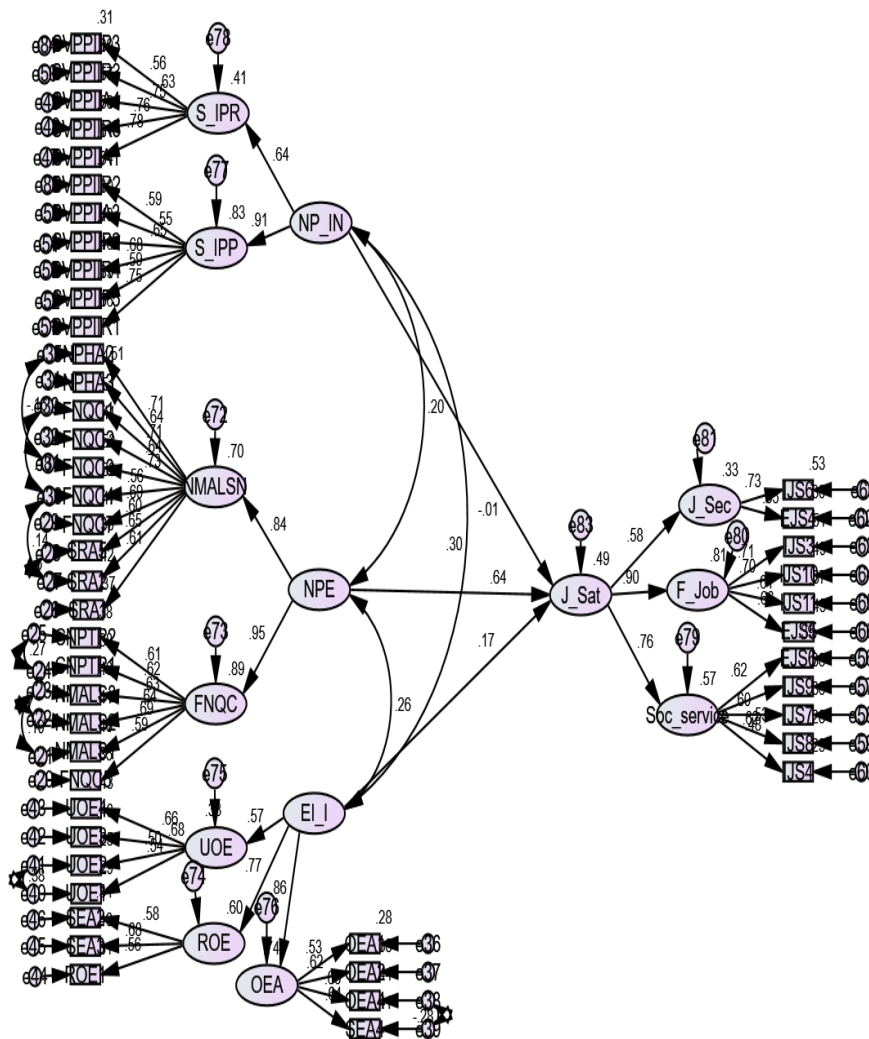
Fig. 7.8d : Structural Model depicting the influence of determinants (NP-IN, NPE, EI) on Job Satisfaction among nurses (Model d)

Table 7.20d : Fit indices for the structural model d (NP-IN, NPE and EI and Job Satisfaction among nurses).

NPAR	C/df	GFI	AGFI	IFI	TLI	CFI	RMSEA	P CLOSE
122	2.021	.890	.878	.905	.898	.905	.037	1.000

Table 7.21d : Influence of determinants (NP-IN, NPE and EI) on Job Satisfaction: Regression output and hypothesis testing

Relationship	Standar-dised Reg. Weights	Estimate	SE	CR	P	Significance	Remarks
H5d J_Sat <-- NP_IN	-.009	-.008	.045	-.183	.854	Not Significant	Not Supported
H6d J_Sat <--- NPE	.638	.407	.047	8.594	***	**Significant**	**Supported**
H7d J_Sat <--- EI	.167	.213	.068	3.157	.002	**Significant**	**Supported**

Note: * represents 10%, ** represent 5% and *** represent 1% level of significance.

Nurse practice environment and emotional intelligence have significant positive influence on the job satisfaction among nurses, thus H6d and H7d are supported. The findings indicate that with a unit increase in the nurse practice environment, nurses' job satisfaction will increase by .407 at $p<0.001$, similarly when nurses' emotional intelligence goes up by an unit, their job satisfaction will improve by .213 at $p<0.002$.

However, "nurses' perceived image of a nurse" does not have significant influence on the job satisfaction among nurses, thus H5d is not supported.

Models in Figures 7.8a-7.8d, Tables 7.20a-7.20d and the findings as indicated by the standardised regression weights in Tables 7.21a-7.21d signify that nurse practice environment has the greatest influence on the job satisfaction among nurses followed by emotional intelligence. Nurses' perception about stakeholders' image of a nurse does not influence job satisfaction among nurses.

7.5.3   Influence of Job Satisfaction on Professionalism
Objective 4: To identify the influence of job satisfaction on professionalism among nurses.

H8   Job satisfaction positively influences professionalism among nurses

The influence of job satisfaction on professionalism among nurses is shown in the structural model in Figure 7.9. Also the model fit indices are found to be within

acceptable range as shown in Table 7.22 and hence the model is used to explain the hypothesized relationships as shown in Table 7.23.

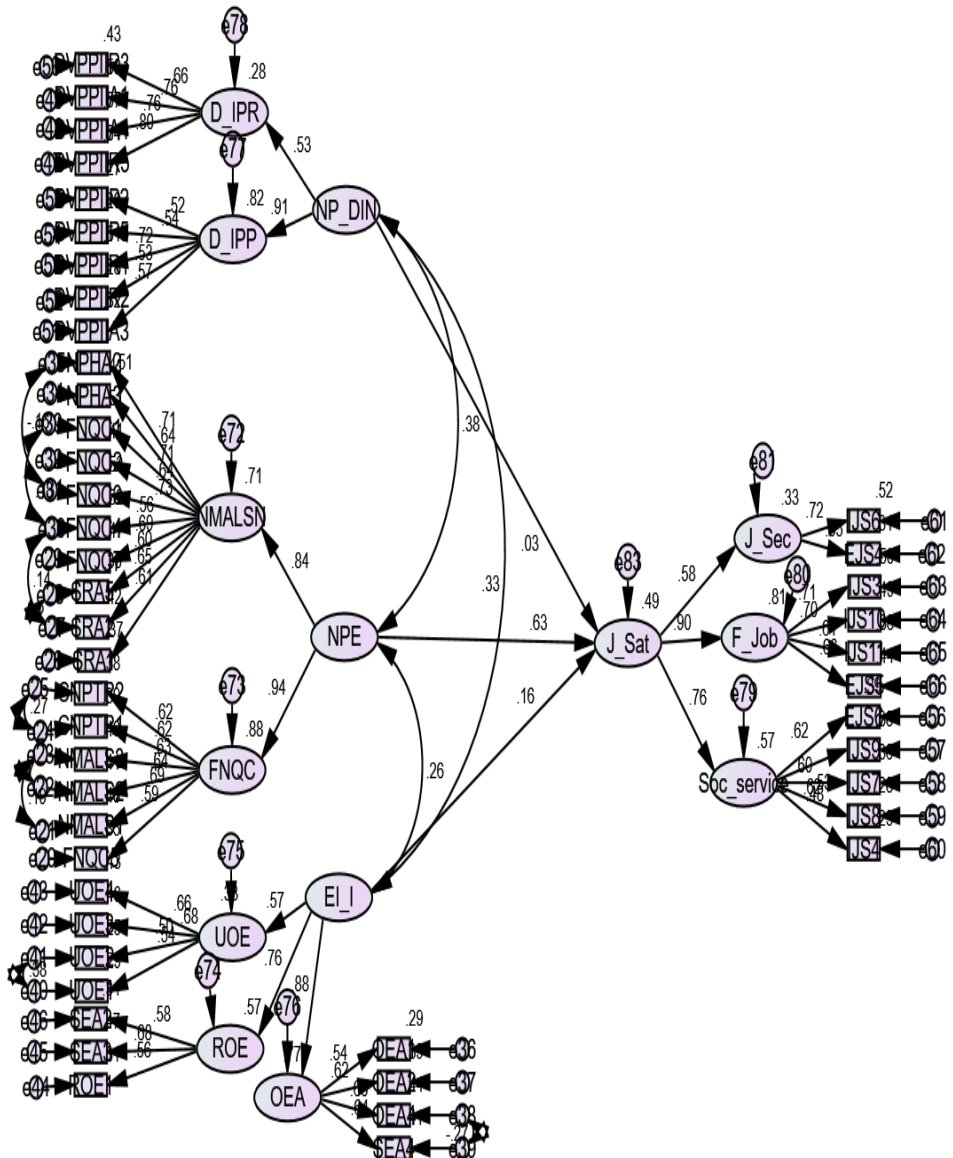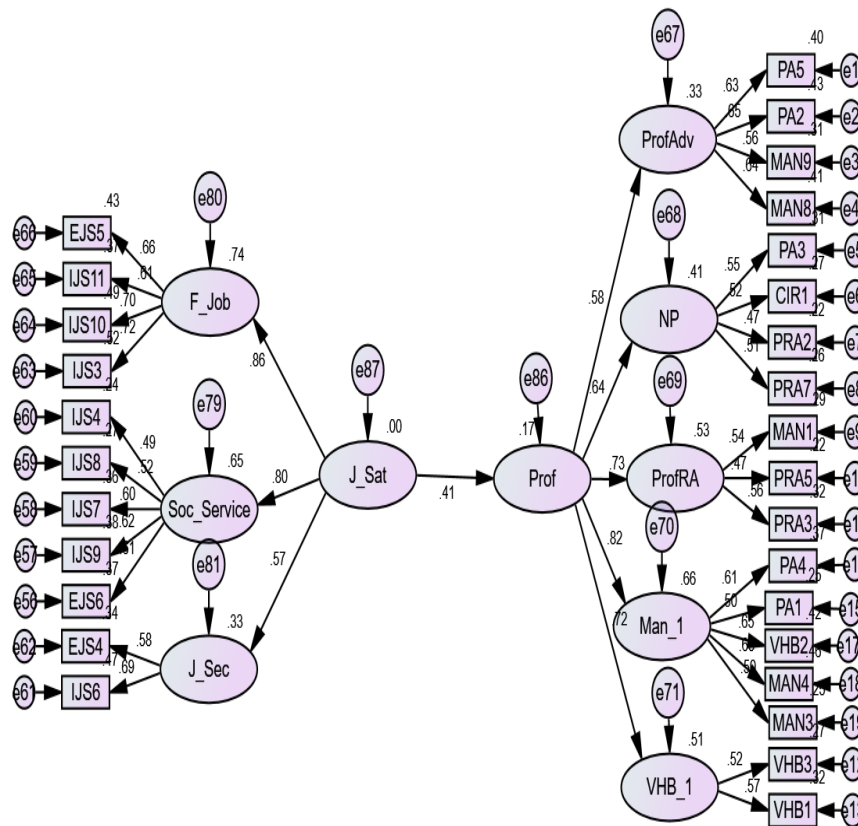**Fig. 7.9 : Structural Model depicting the influence of Job Satisfaction on Professionalism among nurses**

Table 22 : Fit indices for the structural model indicating influence of Job Satisfaction on Professionalism.

NPAR	C/df	RMR	GFI	AGFI	IFI	TLI	CFI	RMSEA	P CLOSE
66	2.049	.050	.935	.923	.910	.900	.909	.037	1.000

Table 23 : Influence of Job Satisfaction on Professionalism among nurses: Regression output and hypothesis testing

Relationship	Standar-dised Reg. Weights	Estimate	SE	CR	P	Significance	Remarks
H8 Prof <--- J_Sat	0.413	.483	.082	5.903	***	**Significant**	**Supported**

Note: *** represent 1% level of significance

Table 23 shows that Job satisfaction has a significant positive influence on professionalism among nurses, thus H8 is supported. The results indicate that for every unit rise in the job satisfaction, nurses' professionalism will increase by 0.483 at $p<0.001$.

7.6   INTERACTION   EFFECTS   OF   DETERMINANATS   ON   PROFESSIONALISM

(Using Interaction-Moderation analysis in SEM)

Objective 5: To test the interaction effect of the determinants on professionalism among nurses.

Interaction effects

H9a1-H9d1	There is a significant interaction effect of nurse practice environment and emotional intelligence (NPExEI) on professionalism among nurses.
H9a2-H9d2	There is a significant interaction effect of nurse practice environment and nurses' perception about stakeholders' image of a nurse (NPExNP-SIN) on professionalism among nurses.
H10a1-H10d1	There is a significant interaction effect of emotional intelligence and nurse practice environment (EIxNPE) on professionalism among nurses.
H10a2- H10d2	There is a significant interaction effect of emotional intelligence and nurses' perception about stakeholders' image of a nurse (EIxNP-SIN) on professionalism among nurses.
H11a1- H11d1	There is a significant interaction effect of nurses' perception about stakeholders' image of a nurse and nurse practice environment (NP-SINxNPE) on professionalism among nurses.
H11a2-H11d2	There is a significant interaction effect of nurses' perception about stakeholders' image of a nurse and emotional intelligence (NP-SINxEI) on professionalism among nurses.

The interaction effects are the combined effects of two independent predictor variables that are tested along with the individual main effects. Two way interactions are used to test the interaction hypotheses in which the independent variables are first standardized following which the product variables are created before being tested in SEM. The unstandardised estimates are used to obtain the slope of interaction. If the

slope relating the continuous exogenous predictor variable and endogenous criterion variable changes systematically (becomes stronger, weaker, changes signs) across levels of a second predictor, the augmentation is considered to be due to the inclusion of the interaction term that is added to the structural model. Such a change is often considered as an interaction effect. The likelihood of controlling for various kinds of random as well as non-random measurement errors is one of the key advantage of using latent variables and SEM instead of simple regression. Hence in this data, interaction effects of the determinants were tested using SEM and the two way interaction method. The unstandardised regression weights and the hypothesis tested are shown in Table 7.24.

Table 7.24 : Interaction effect of determinants on Professionalism among nurses

	Unstandardised Regression Weights						
Hypo-thesis	**Interaction**	**IDV -DV**	**Mod -DV**	**IDVXMod**	**P**	**Significance**	**Remarks**
			NPE as moderator				
H9a1	Prof<--- EIxNPE	.465	.163	-.500	.273	Not significant	Not supported
H9a2	Prof<-NP-DINxNPE	.290	.163	1.437	**.002**	**significant**	**Supported**
H9b1	Prof<--- EIxNPE	.470	.154	-.583	.204	Not significant	Not supported
H9b2	Prof<-- NP-PINxNPE	.219	.154	1.653	**.001**	**significant**	**Supported**
H9c1	Prof<--- EIxNPE	.447	.156	-.421	.360	Not significant	Not supported
H9c2	Prof<--- NP-OHSINxNPE	.341	.156	.576	.249	Not significant	Not supported
H9d1	Prof<--- EIxNPE	.471	.173	-.383	.405	Not significant	Not supported
H9d2	Prof<--- NP-INxNPE	.266	.173	.487	.347	Not significant	Not supported
			EI as moderator				
H10a1	Prof<--- NPExEI	.162	.480	-.313	.513	Not significant	Not supported
H10a2	Prof<-NP-DINxEI	.311	.480	-.039	.941	Not significant	Not supported
H10b1	Prof<--- NPExEI	.161	.484	-.149	.754	Not	Not

						significant	supported
H10b2	Prof<-- NP-PINxEI	.268	.484	-.727	.164	Not significant	Not supported
H10c1	Prof<--- NPExEI	.158	.447	.-366	.428	Not significant	Not supported
H10c2	Prof<--- NP-OHSINxEI	.359	.447	.245	.629	Not significant	Not supported
H10d1	Prof<--- NPExEI	.178	.476	-.282	.541	Not significant	Not supported
H10d2	Prof<--- NP-INxEI	.276	.476	-.308	.553	Not significant	Not supported
NP-SIN as moderator							
H11a1	Prof<--- NPExNP-DIN	.161	.286	1.490	**.002**	**Significant**	**Supported**
H11a2	Prof<-EIxNP-DIN	.461	.286	-.515	.308	Not significant	Not supported
H11b1	Prof<--- NPExNP-PIN	.152	.228	1.712	**.001**	**Significant**	**Supported**
H11b2	Prof<-EIxNP-PIN	.465	.228	-1.052	**.037**	**Significant**	**Supported**
H11c1	Prof<--- NPExNP-OHSIN	.153	.342	.479	.340	Not significant	Not supported
H11c2	Prof<-EIxNP-OHSIN	.441	.342	.074	.884	Not significant	Not supported
H11d1	Prof<--- NPExNP-IN	.171	.263	.563	.290	Not significant	Not supported
H11d2	Prof<-EIxNP-IN	.473	.263	-.507	.342	Not significant	Not supported

*IDV: independent variable; DV: dependent variable; MOD: moderating variable; IV: interaction between variables

The results indicate that the interaction between nurse practice environment and emotional intelligence (EIxNPE) as well as other nurses' perception about other hospital staffs' image and self image of a nurse (NP-OHSINxNPE and NP-INxNPE) did not have significant interaction effects on professionalism. However, nurses' perception about doctors' image of a nurse and nurse practice environment (**H9a2**: NP-DINxNPE; P < 0.002) and nurses' perception about patients' image of a nurse and nurse practice environment (**H9b2:** NP-PINxNPE; P < 0.001) had significant interaction effects.

Interaction between nurses' perception about stakeholders' image of a nurse and emotional intelligence (NP-SINxEI) and nurse practice environment and emotional intelligence (NPExEI) did not have significant interaction effects on professionalism.

Interaction between emotional intelligence and nurses' perception about doctors' image of a nurse (EIxNP-DIN), emotional intelligence and nurses' perception about other hospital staffs' image of a nurse EIxNP-OHSIN), as well as between nurses perception about image of a nurse (EIxNP-IN) did not have significant effects on professionalism. Also, interaction between nurse practice environment and nurses' perception about other hospital staffs' image of a nurse (EIxNP-OHSIN), and nurses' perception about image of a nurse (NPExNP-IN) did not have significant effects.

However, interaction between nurse practice environment and nurses' perception about doctors' image of a nurse (**H11a1**: NPExNP-DIN; P < 0.002), as well as nurses perception about patients' image of a nurse (**H11b1**: NPExNP-PIN; P < 0.001) had significant effects on professionalism. Interaction between emotional intelligence and nurses' perception about patients' image of a nurse (**H11b2**: EIxNP-PIN; P < 0.037) also had significant interaction effects on nurses' professionalism. The regression slopes obtained are shown in Fig. 7.10a1 – 7. 12d2.
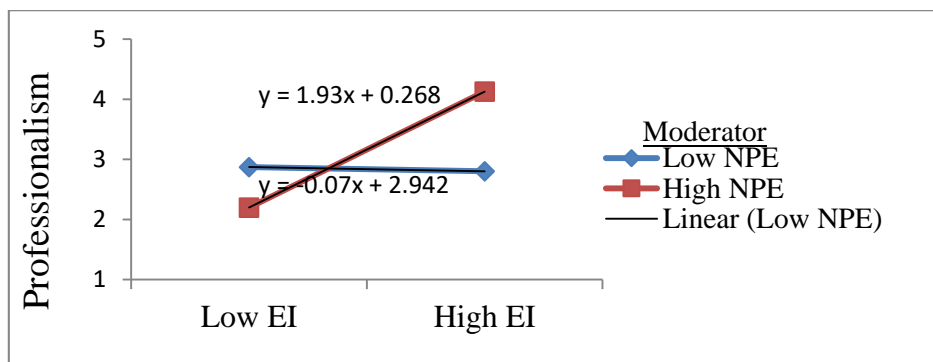
Fig. 7.10a1 : Regression slope showing the interaction effects of NPE and EI on professionalism. (NPE dampens the positive relationship between EI and Professionalism at P < 0.273)
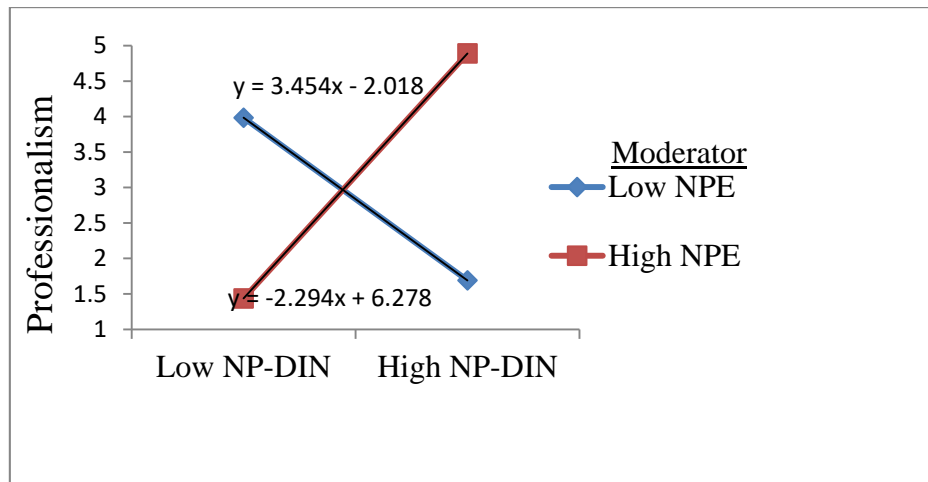
Fig. 7.10a2 : Regression slope showing the interaction effects of NPE and NP-DIN on professionalism. (NPE strengthens the positive relationship between NP-DIN and Professionalism at **P < 0.002**)
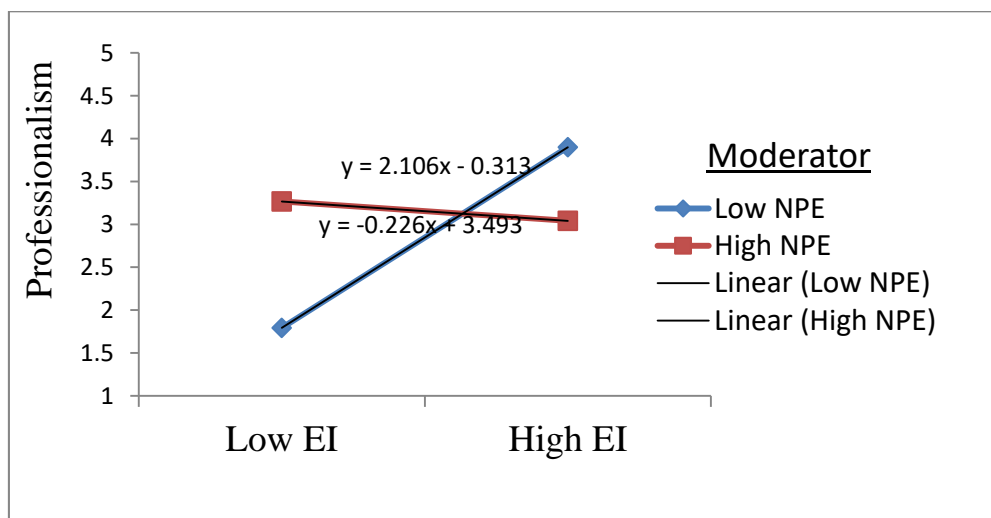
Fig. 7.10b1: Regression slope showing the interaction effects of NPE and EI on professionalism. (NPE dampens the positive relationship between EI and Professionalism at P < 0.204)
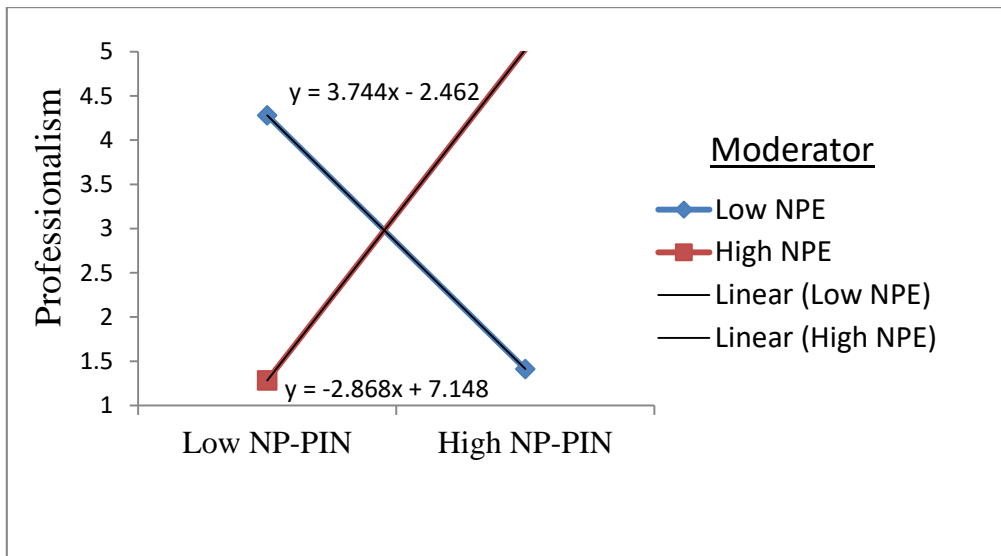
Fig. 7.10b2 : Regression slope showing the interaction effects of NPE and NP-PIN on professionalism. (NPE strengthens the positive relationship between NP-PIN and Professionalism at **P < 0.001**)
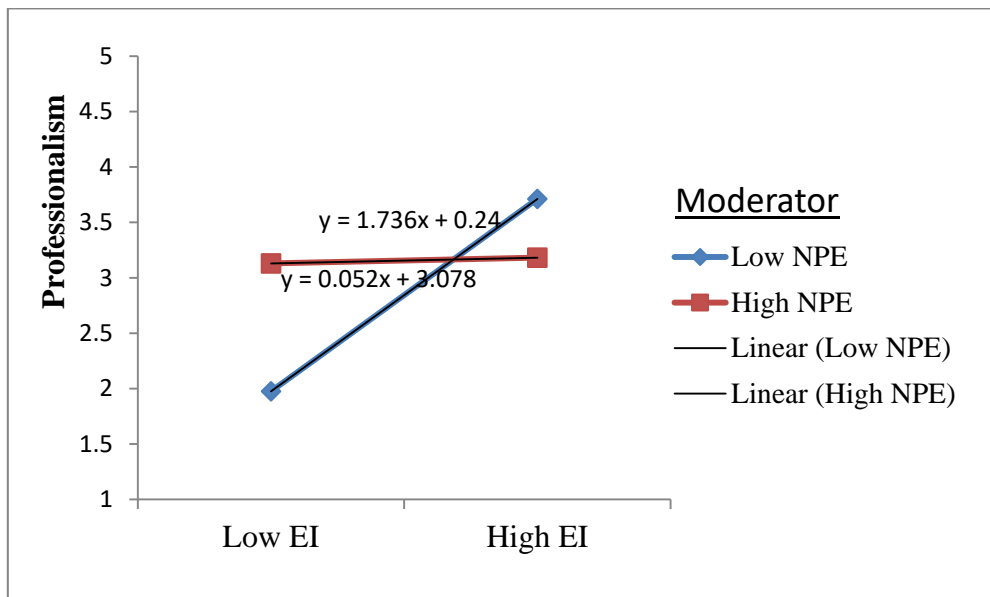
Fig. 7.10c1 : Regression slope showing the interaction effects of NPE and EI on professionalism. (NPE dampens the positive relationship between EI and Professionalism at P < 0.360)
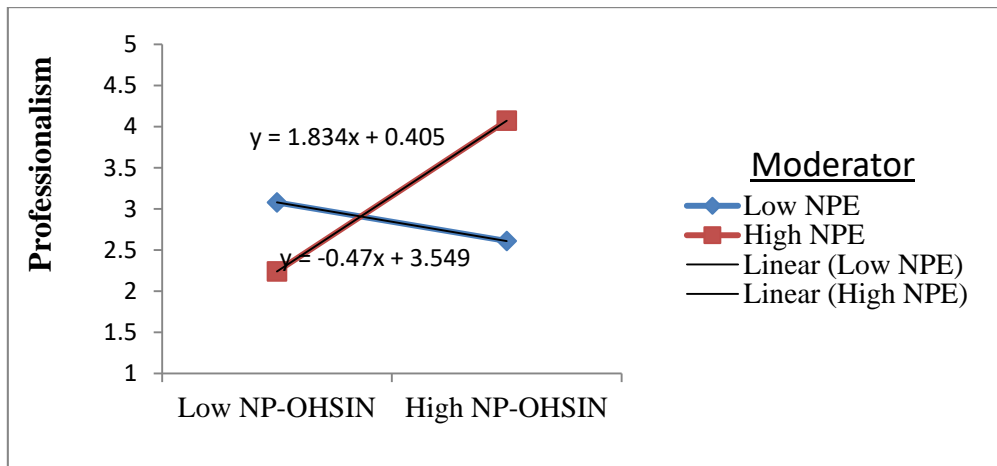
Fig. 7.10c2 : Regression slope showing the interaction effects of NPE and NP-OHSIN on professionalism. (NPE strengthens the positive relationship between NP-OHSIN and Professionalism at P < 0.249)
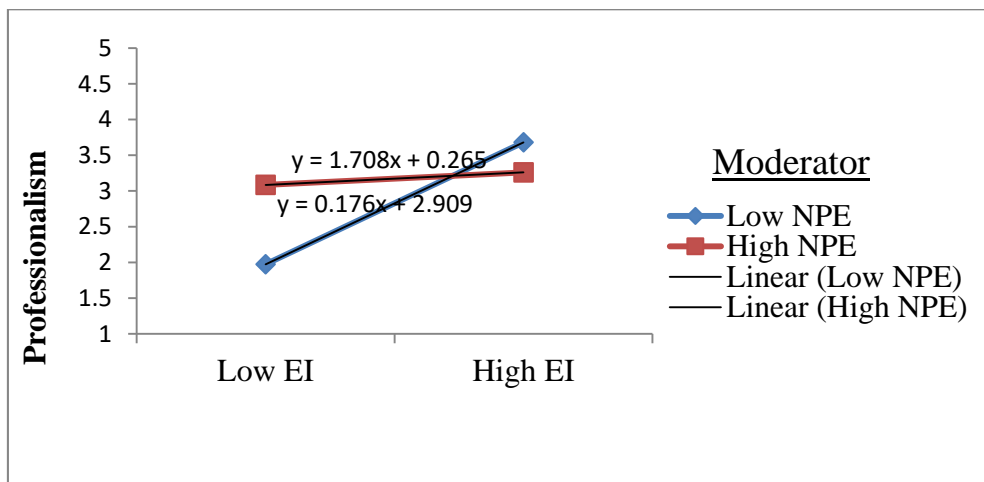
Fig. 7.10d1 : Regression slope showing the interaction effects of NPE and EI on professionalism. (NPE dampens the positive relationship between EI and Professionalism at P < 0.405)
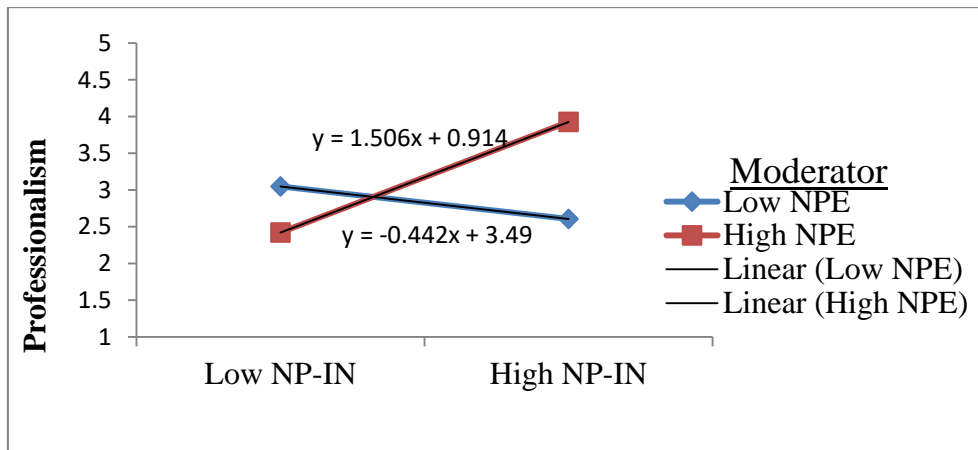
Fig. 7.10d2 : Regression slope showing the interaction effects of NPE and NP-IN on professionalism. (NPE strengthens the positive relationship between NP-IN and Professionalism at $P < 0.347$)
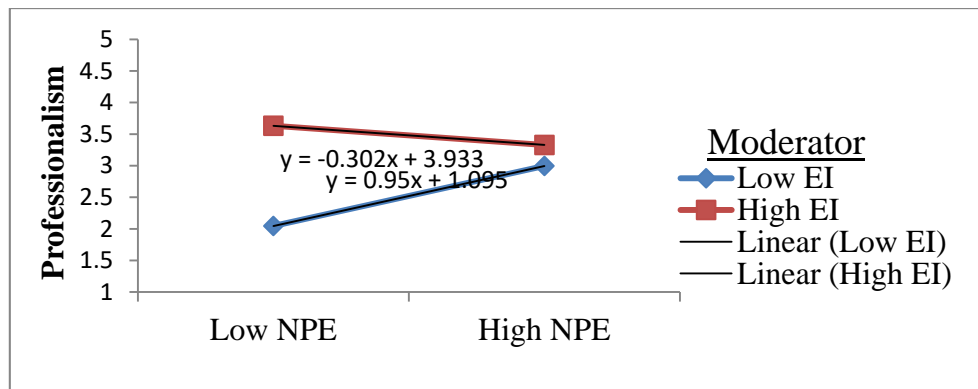
Fig. 7.11a1 : Regression slope showing the interaction effects of EI and NPE on professionalism. (EI dampens the positive relationship between NPE and Professionalism at $P < 0.513$)
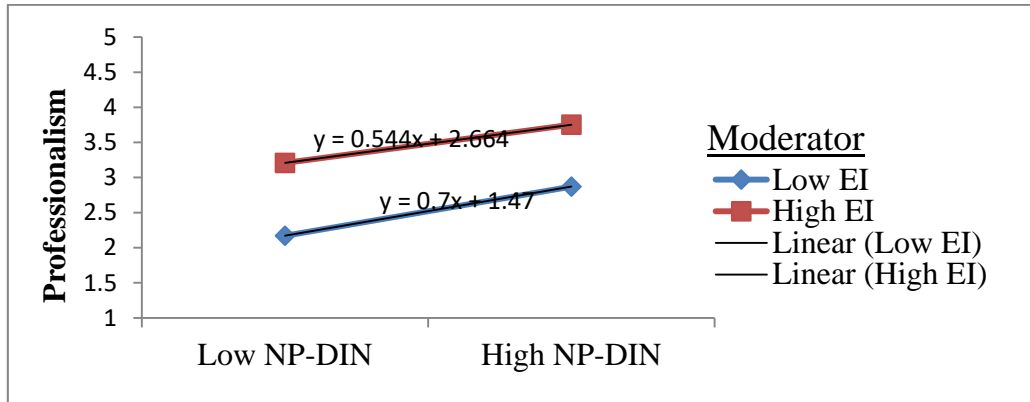
Fig. 7.11a2 : Regression slope showing the interaction effects of EI and NP-DIN on professionalism. (EI dampens the positive relationship between NP-DIN and Professionalism at P <0.941)
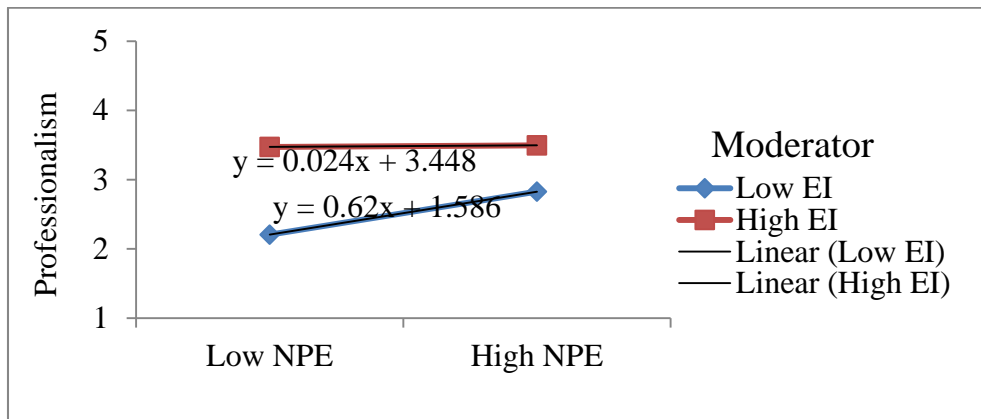
Fig. 7.11b1 : Regression slope showing the interaction effects of EI and NPE on professionalism. (EI dampens the positive relationship between NPE and Professionalism at P < 0.754)
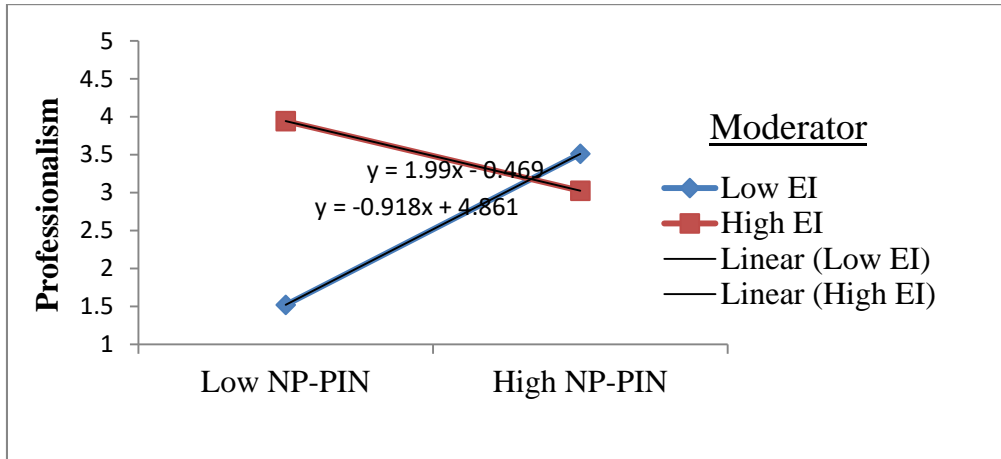
Fig. 7.11b2 : Regression slope showing the interaction effects of EI and NP-PIN on professionalism. (EI dampens the positive relationship between NP-PIN and Professionalism at P < 0.164)
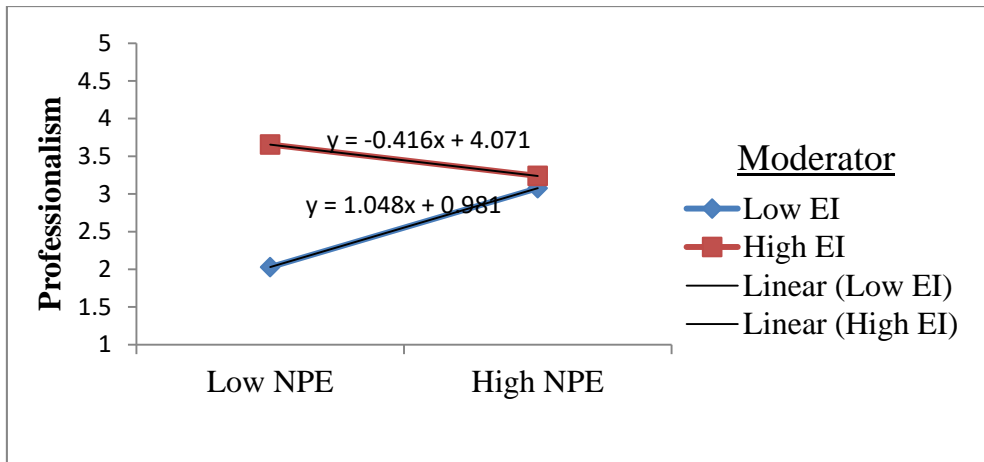
Fig. 7.11c1 : Regression slope showing the interaction effects of EI and NPE on professionalism. (EI dampens the positive relationship between NPE and Professionalism at P < 0.428)
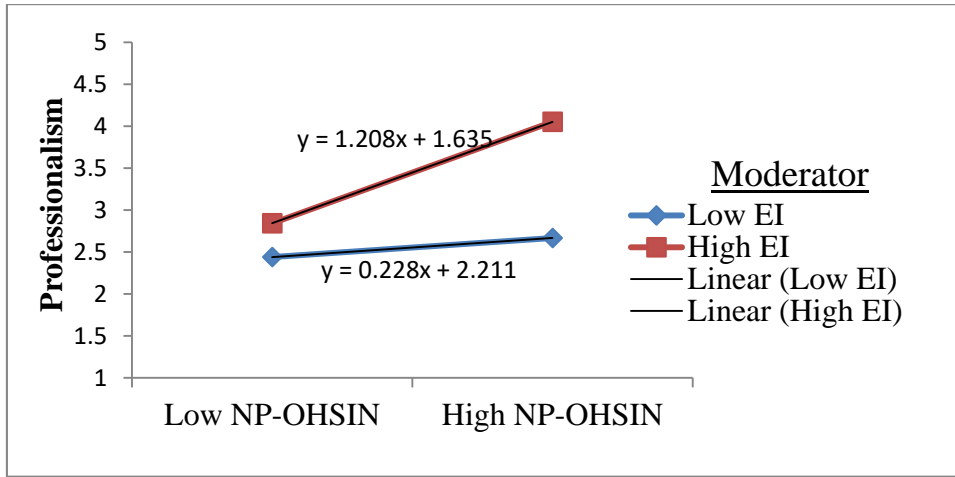
Fig. 7.11c2 : Regression slope showing the interaction effects of EI and NP-OHSIN on professionalism. (EI strengthens the positive relationship between NP-OHSIN and Professionalism at $P < 0.629$)
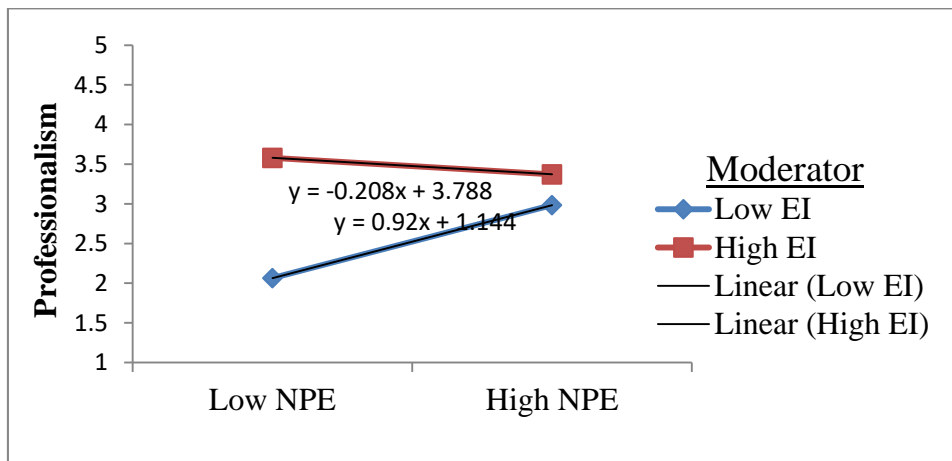
Fig. 7.11d1 : Regression slope showing the interaction effects of EI and NPE on professionalism. (EI dampens the positive relationship between NPE and Professionalism at $P < 0.541$)
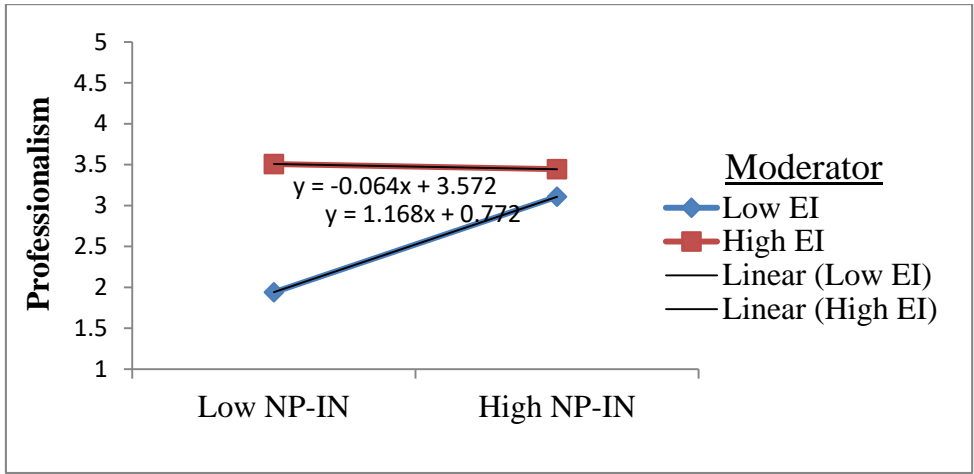
Fig. 7.11d2 : Regression slope showing the interaction effects of EI and NP-IN on professionalism. (EI dampens the positive relationship between NP-IN and Professionalism at P < 0.553)
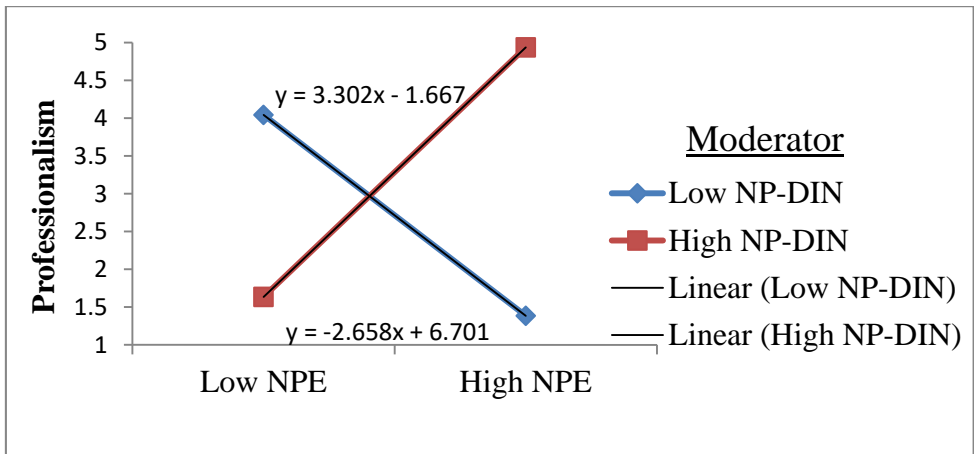
Fig. 7.12a1 : Regression slope showing the interaction effects of NP-DIN and NPE on professionalism. (NP-DIN strengthens the positive relationship between NPE and Professionalism at **P < 0.002**)
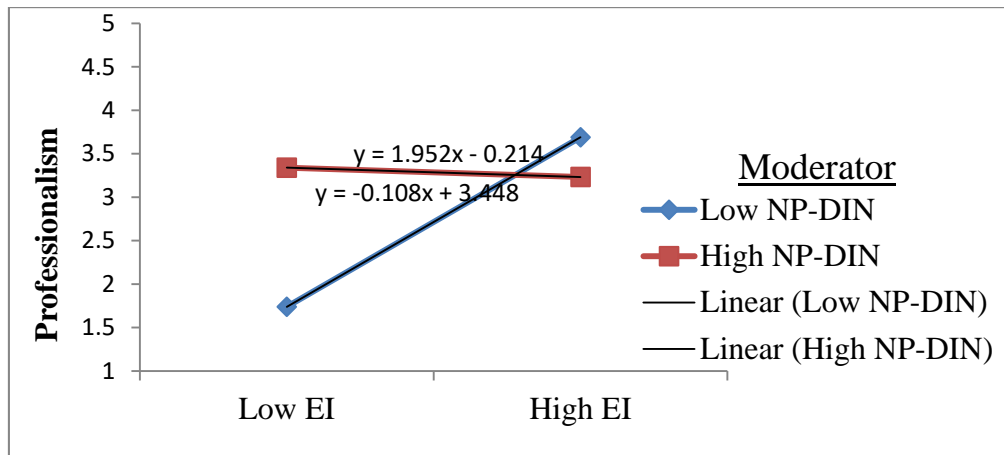
Fig. 7.12a2 : Regression slope showing the interaction effects of NP-DIN and EI on professionalism. (NP-DIN dampens the positive relationship between EI and Professionalism at P < 0.308)
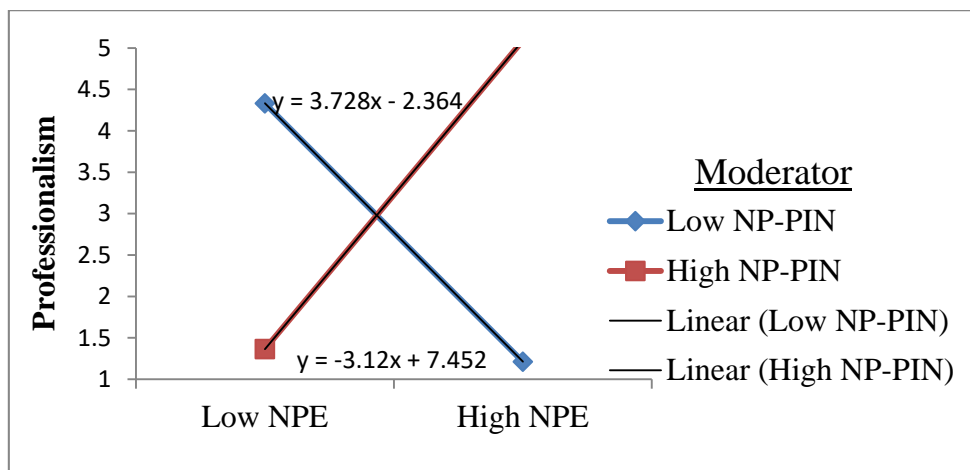
Fig. 7.12b1 : Regression slope showing the interaction effects of NP-PIN and NPE on professionalism. (NP-PIN strengthens the positive relationship between NPE and Professionalism at **P < 0.001**)
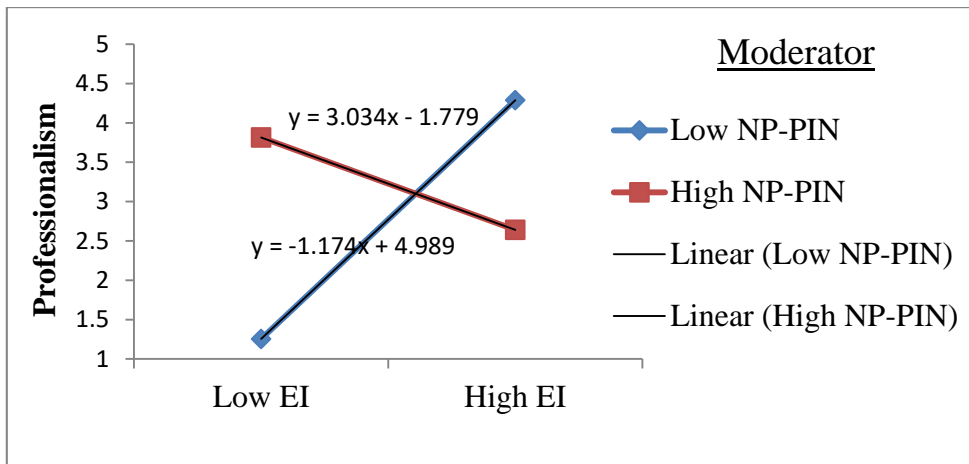
Fig. 7.12b2 : Regression slope showing the interaction effects of NP-PIN and EI on professionalism. (NP-PIN dampens the positive relationship between EI and Professionalism at **P < 0.037**)
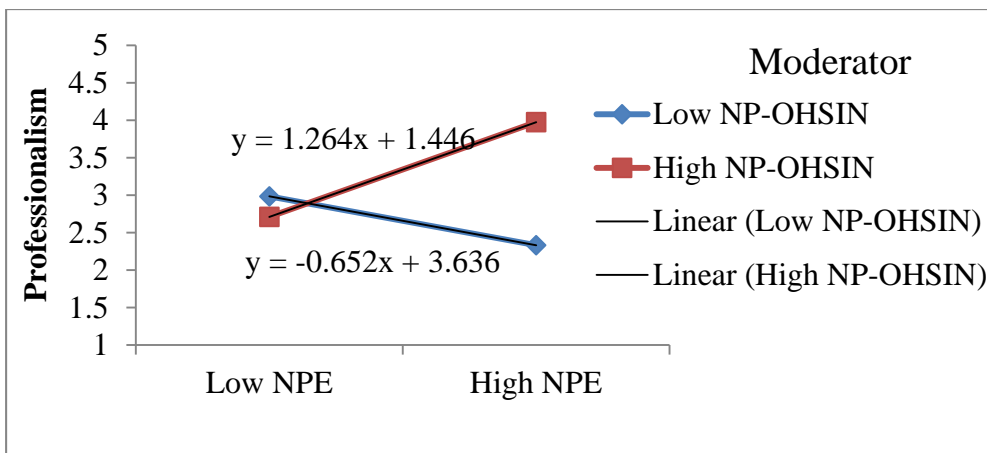
Fig. 7.12c1 : Regression slope showing the interaction effects of NP-OHSIN and NPE on professionalism. (NP-OHSIN strengthens the positive relationship between NPE and Professionalism at P < 340)
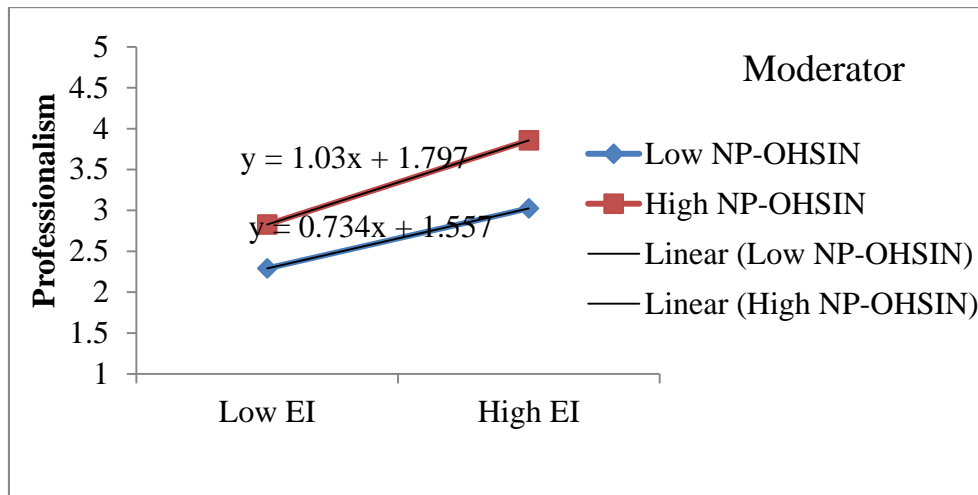
Fig. 7.12c2 : Regression slope showing the interaction effects of NP-OHSIN and EI on professionalism. (NP-OHSIN strengthens the positive relationship between EI and Professionalism at P < 0.884)
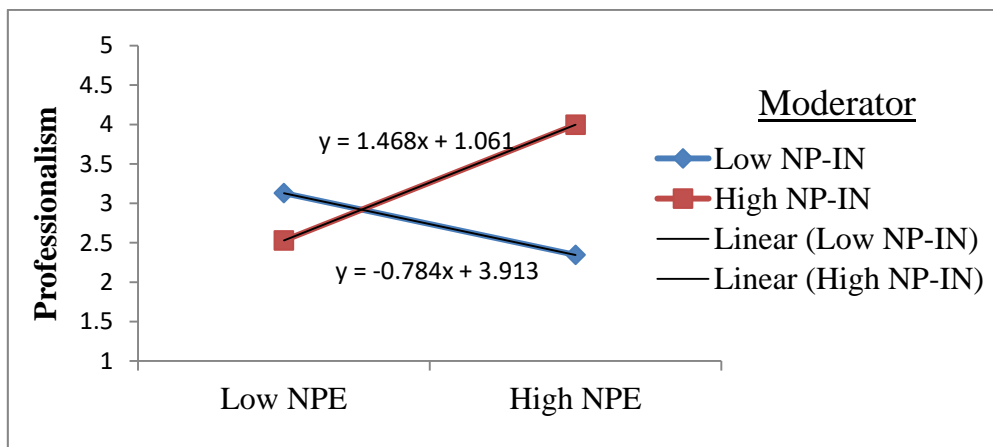
Fig. 7.12d1 : Regression slope showing the interaction effects of NP-IN and NPE on professionalism. (NP-IN strengthens the positive relationship between NPE and Professionalism at P < 0.290)
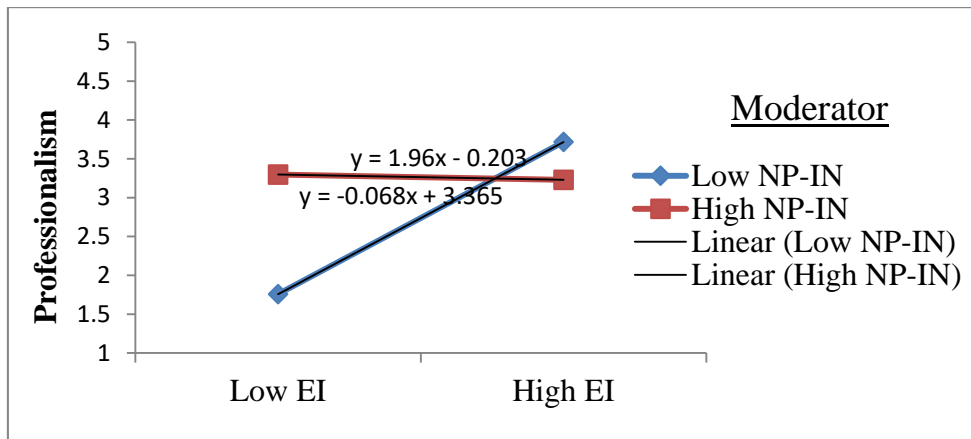
Fig. 7.12d2 : Regression slope showing the interaction effects of NP-IN and EI on professionalism. (NP-IN dampens the positive relationship between EI and Professionalism at P < 0.342)

7.7 MEDIATION EFFECT OF JOB SATISFACTION

Objective 6: To evaluate the mediation effect of job satisfaction on the relationship between the determinants and professionalism among nurses

H12	There is a mediation effect of job satisfaction on the relationship between the determinants and professionalism among nurses
H12a1-H12d1	There is a mediation effect of job satisfaction on the relationship between nurses' perception about the stakeholders' image of a nurse and professionalism among nurses.
H12a2- H12d2	There is a mediation effect of job satisfaction on the relationship between the nurse practice environment and professionalism among nurses
H12a3- H12d3	There is a mediation effect of job satisfaction on the relationship between emotional intelligence and professionalism among nurses.

Mediation effect is the effect of a third variable influencing the relationship between two different constructs. Application of a mediator explains why a particular

relationship exists between the two constructs. To understand the mediation effect of a variable, it is required to test the model for direct as well as indirect effects. Direct effect is the relationship between the independent and the dependent variable which is shown using a single headed arrow Fig. 7.13a. Indirect effect is the relationship which is indicated through a sequence of relationships that involves at least one intervening variable Fig. 7.13b. Thus, indirect effect is indicated through a sequence of more than one direct effect (compound path) that is depicted using more than one arrow. The effect is termed as complete mediation if the relationship between the two constructs is completely explained by the mediator. However, the effect is termed as partial mediation if some relationships between the constructs still remain unexplained by the mediator (Hair, Black, Babin, & Anderson, 2010).

The steps specified by Hair, Black, Babin, & Anderson (2010) for testing mediation effects of a construct are as follows:

1. Establish that the individual relationship between constructs are statistically significant

    a. Establish that a direct relationship exists between the independent and the dependent construct.

    b. Establish that the mediator is related to the independent construct.

    c. Establish that there is a relationship between the mediator and the dependent construct.

2. Estimate the initial model indicating a direct relationship (c) between the independent and the dependent construct. Then, add the mediator and estimate another model and the two additional paths (a and b) in Fig. 7.13a and Fig. 7.13b.

    a. Mediation is not supported if the relationship (c') between the independent and the dependent constructs remain significant and unchanged following the inclusion of the mediator in the model as an additional predictor.

    b. Partial mediation is supported if c' is reduced, but remains significant following the inclusion of the mediator in the model.

    c. Full mediation is supported if c' is reduced to an insignificant level after including the mediator construct in the model.

In this study the independent variables are the determinants, dependent variable is professionalism and the mediator variable is job satisfaction. The Amos output for the mediation analysis is presented in four different models presented in Figures 7.14a – 7.14d and Table 7.25.

Determinants $\xrightarrow{\hspace{2cm}}$ Professionalism
$$c$$
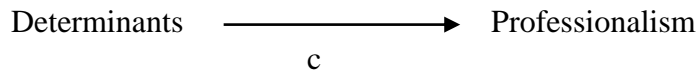
Fig.7.13a : Direct effect (c) of the independent variable on the dependent variable
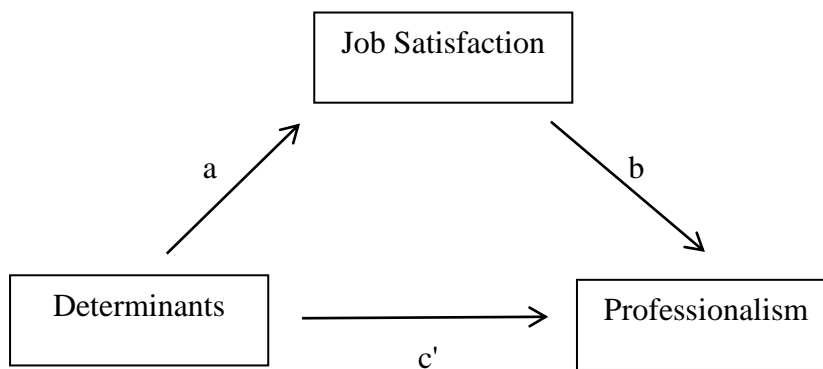
Fig. 7.13b : Direct effect (c') of independent (predictor) variable on the dependent variable, and the indirect effect (a X b) after the inclusion the mediator variable
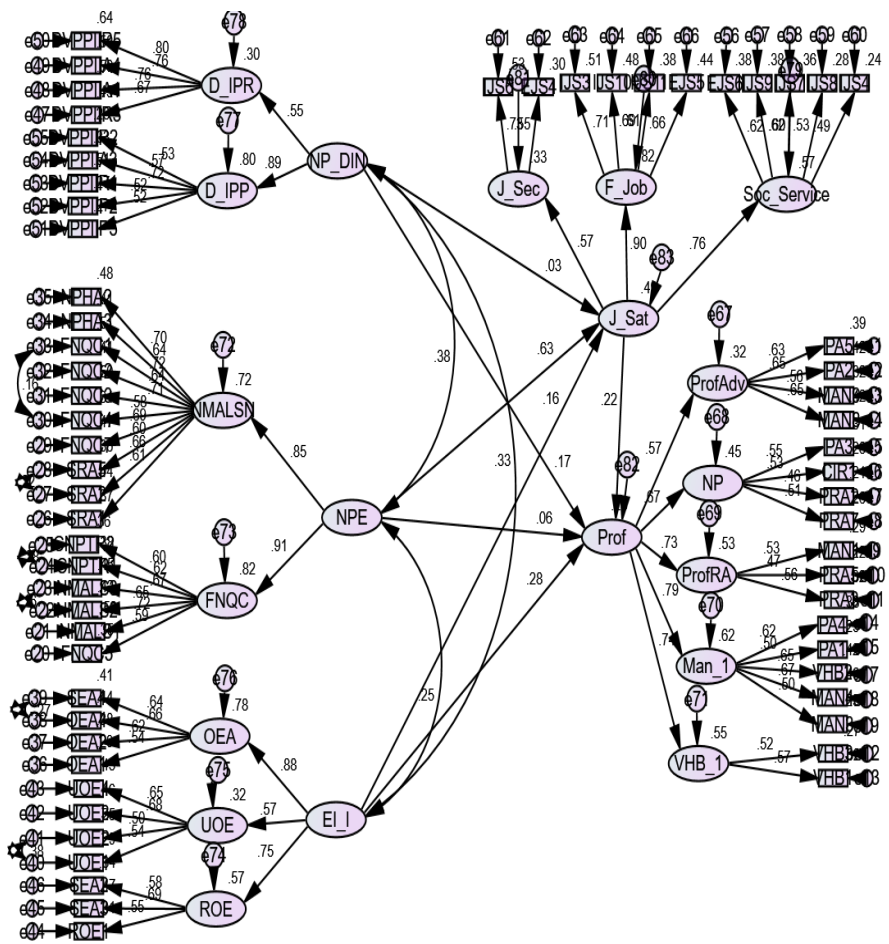
Fig. 7.14a : Structural model depicting the mediation effect of job satisfaction on the relationship between the determinants (NP-DIN, NPE, EI) and Professionalism (Model a)
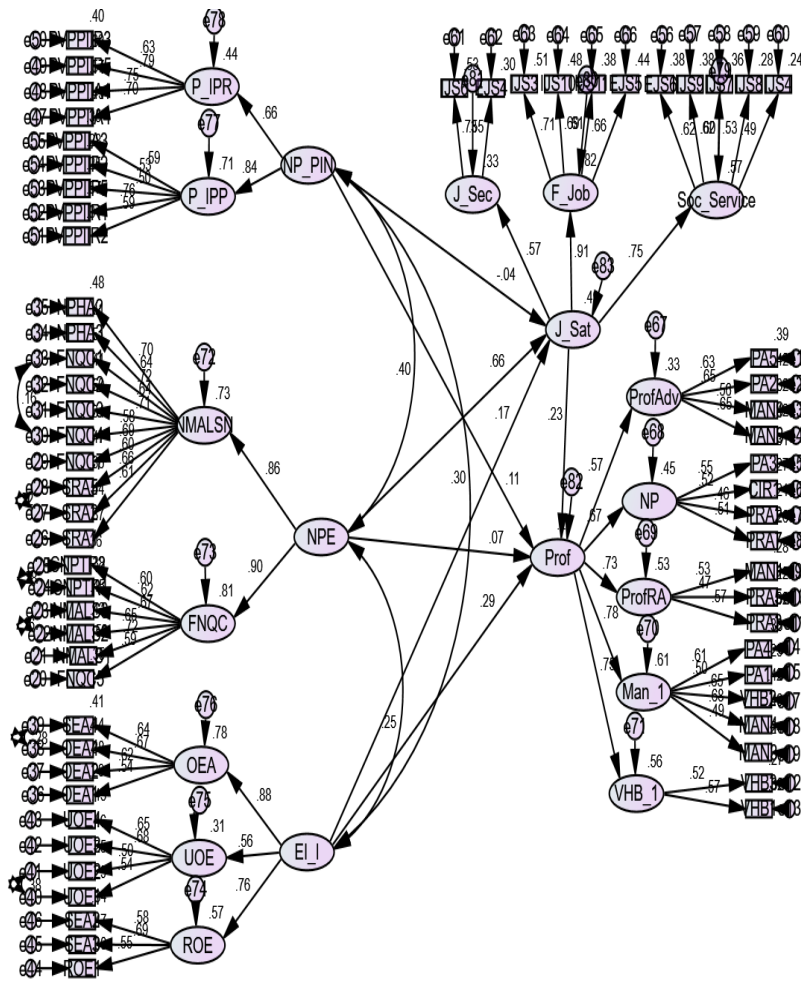
Fig. 7.14b : Structural model depicting the mediation influence of job satisfaction on the relationship between the determinants (NP-PIN, NPE, EI) and Professionalism (Model b)
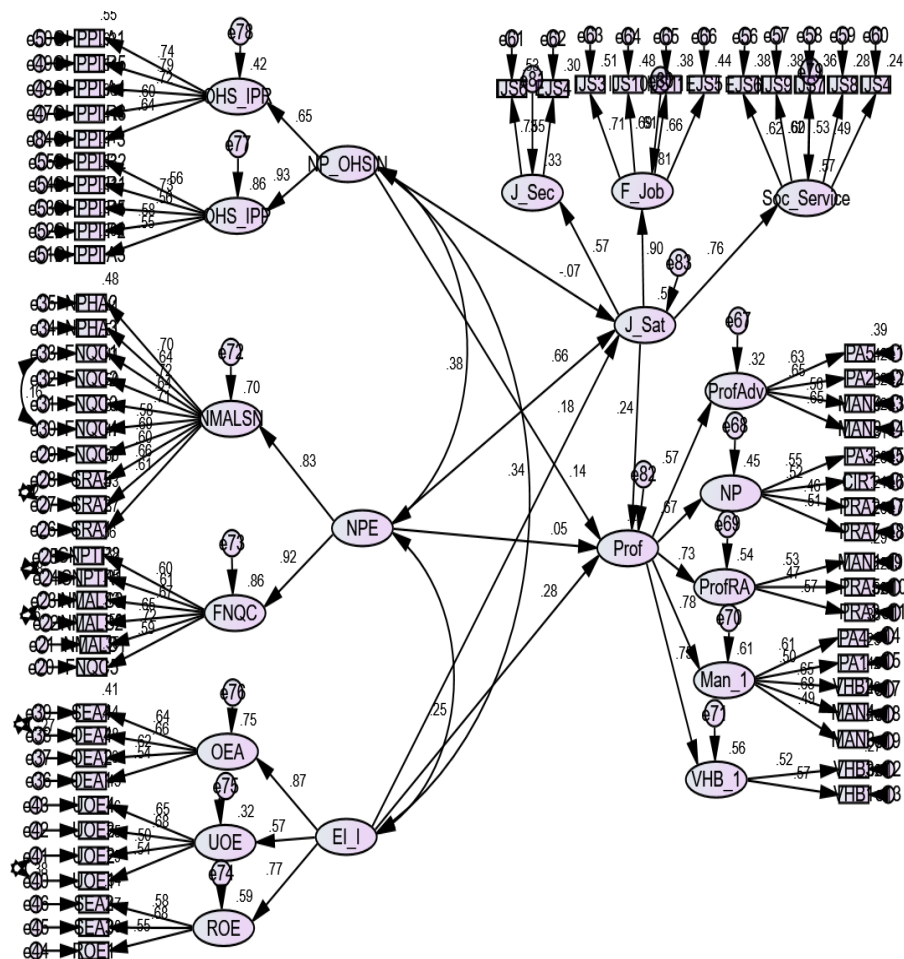
Fig. 7.14c : Structural model depicting the mediation influence of job satisfaction on the relationship between the determinants (NP-OHSIN, NPE, EI) and Professionalism (Model c)
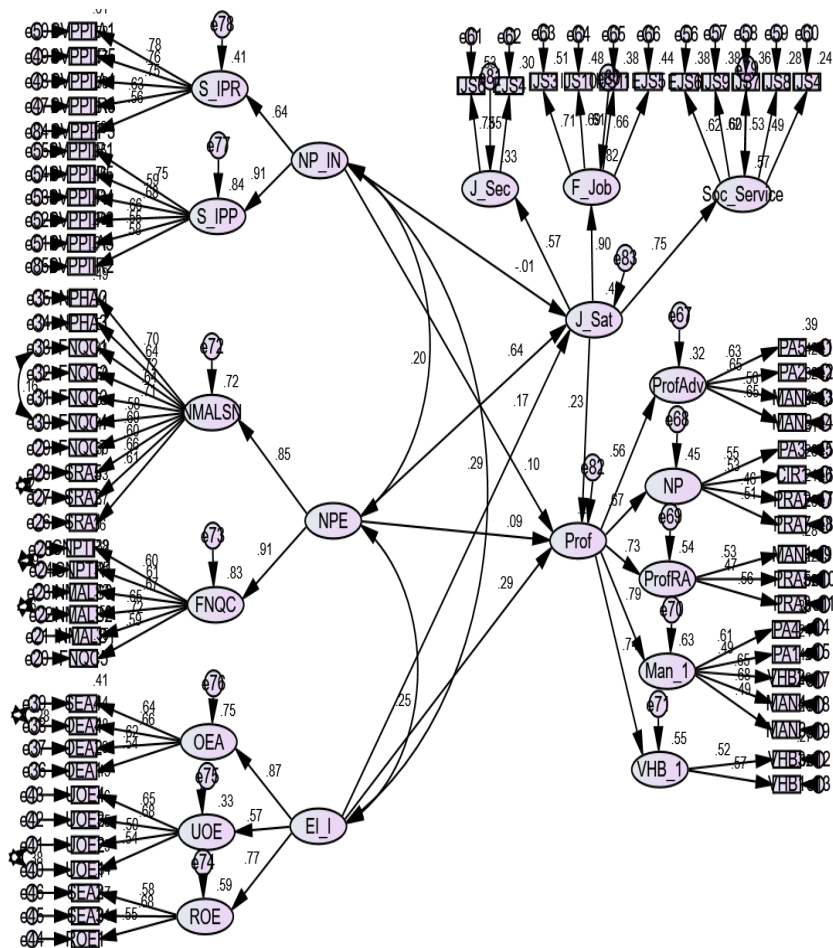
Fig. 7.14d : Structural model depicting the mediation influence of job satisfaction on the relationship between the determinants (NP-IN, NPE, EI) and Professionalism (Model d)

Table 7.25 : Mediation effect of job satisfaction on the relationship between the determinants and professionalism among nurses

Hypothesized Relationship	Direct without mediation c	Standar-dized Direct with mediation c'	a	b	Standardized Indirect with mediation (a x b)	Effect
NPE, EI, NP-DIN - J_SAT – PROF (Model a)						
H12a1: NP_DIN-J_Sat-Prof	.172(.009)	167(.009)	.030 (.592)	.218 (.010)	.006(.621)	Not Supported
H12a2: NPE – J_Sat-Prof	.194(sig)	.059(.458)	.633 (sig)	.218(.010)	.138(.019)	**Full Mediation Supported**
H12a3: EI- J_Sat-Prof	.315(sig)	.276(sig)	.156 (.003)	.218(.010)	.034(.027)	**Part Mediation Supported**
NPE, EI, NP_ PIN - J_SAT – PROF (Model b)						
H12b1: NP_PIN- J_Sat-Prof	.093 (.137)	.109 (.084)	-.039 (.493)	.229(.008)	-.009(.519)	Not Supported
H12b2: NPE – J_Sat-Prof	.220 (sig)	.071 (.390)	.656 (sig)	.229(.008)	.150(.015)	**Full Mediation Supported**
H12b3: EI- J_Sat-Prof	.337 (sig)	.290 (sig)	.172 (.001)	.229(.008)	.039(.019)	**Part Mediation Supported**

NPE, EI, NP_OHSIN - J_SAT – PROF (Model c)

Hypothesized Relationship	Direct without mediation c	Standar-dized Direct with mediation c'	a	b	Standardized Indirect with mediation (a x b)	Effect
H12c1: NP_OHSIN-J_Sat-Prof	.128(.037)	.135(.021)	-.067 (.192)	.239(.006)	-.016(.235)	Not Supported
H12c2: NPE – J_Sat-Prof	.196 (sig)	.054(.511)	.661 (sig)	.239(.006)	.158(.012)	**Full Mediation Supported**
H12c3: EI- J_Sat-Prof	.332 (sig)	.283(sig)	.183 (sig)	.239(.006)	.044(.015)	**Part Mediation Supported**
NPE, EI, NP_ IN - J_SAT – PROF (Model d)						
H12d1: NP_IN- J_Sat-Prof	.089 (.101)	.096 (.070)	-.005(.910)	.227(.008)	-.001 (.954)	Not Supported
H12d2: NPE – J_Sat-Prof	.227 (sig)	.092 (.234)	.643(sig)	.227(.008)	.146 (.015)	**Full Mediation Supported**
H12d3: EI- J_Sat-Prof	.337 (sig)	.291 (sig)	.165(.002)	.227(.008)	.037 (.021)	**Part Mediation Supported**

In the four structural models (7.14a – 7.14d) testing for mediation effects the direct effect of nurses' perception about stakeholders'image of a nurse on professionalism is significant incase of doctors' and other hospital staffs' image of a nurse. However there is no significant mediator effect of job satisfaction. Hypothesis H12a1 – H12d1 are not supported indicating that there is no mediation effect of job satisfaction on the relationship between nurses' perception about stakeholders' image of a nurse and professionalism among nurses.

The direct effect of nurse practice environment which was significant is reduced and become not significant following the introduction of job satisfaction as a mediator in all the four models. In all the four models **H12a2 - H12d2** is supported indicating that there is a full mediation effect of job satisfaction on the relationship between the nurse practice environment and professionalism among nurse.

However, the direct effect of emotional intelligence on professionalism which is significant continues to be significant but is reduced following the addition of job satisfaction as the mediator. Hence, the partial mediation effects of job satisfaction on the relationship between emotional intelligence and professionalism is supported. In all the four models, **H12a3 - H12d3** is supported indicating that there is partial mediation effect of job satisfaction on the relationship between emotional intelligence and professionalism among nurses.

7.8 MODERATION EFFECT OF DEMOGRAPHIC VARIABLES
(Using Multi-Group Moderation Analysis)

Objective7: To estimate the moderation effect of the demographic variables on the relationship between the determinants and professionalism and job satisfaction among nurses.

Moderation Effect

Overall model level

H13a –H22a

(NP-DIN)

There is a significant moderation effect of demographic variables on the relationship between the determinants, job satisfaction and professionalism among nurses.

H13b –H22b (NP-PIN)	There is a significant moderation effect of demographic variables on the relationship between the determinants, job satisfaction and professionalism among nurses.
H13c –H22c (NP-OHSIN)	There is a significant moderation effect of demographic variables on the relationship between the determinants, job satisfaction and professionalism among nurses.
H13d –H22d (NP-IN)	There is a significant moderation effect of demographic variables on the relationship between the determinants, job satisfaction and professionalism among nurses.

Path by path moderation

Nurses' perception about stakeholders' image of a nurse and professionalism (NP-SIN,Prof)

H13a1-H22a1	There is a significant moderation effect of demographic variables on the relationship between nurses' perception about doctors' image of a nurse (NP-DIN) and professionalism among nurses.
H13b1-H22b1	There is a significant moderation effect of demographic variables on the relationship between nurses' perception about patients' image of a nurse (NP-PIN) and professionalism among nurses.
H13c1-H22c1	There is a significant moderation effect of demographic variables on the relationship between nurses' perception about other hospital staffs' image of a nurse (NP-OHSIN) and professionalism among nurses.
H13d1-H22d1	There is a significant moderation effect of demographic variables on the relationship between the nurses' perceived image of a nurse (NP-IN) and professionalism among nurses.

Nurses' perception about stakeholders' image of a nurse and job satisfaction (NP-SIN,J_Sat)

H13a2-H22a2	There is a significant moderation effect of demographic variables on the relationship between nurses' perception about doctors' image of a nurse (NP-DIN) and job satisfaction among nurses.
H13b2-H22b2	There is a significant moderation effect of demographic variables on the relationship between nurses' perception about patients' image of a nurse (NP-PIN) and job satisfaction among nurses.

H13c2-H22c2	There is a significant moderation effect of demographic variables on the relationship between nurses' perception about other hospital staffs' image of a nurse (NP-OHSIN) and job satisfaction among nurses.
H13d2-H22d2	There is a significant moderation effect of demographic variables on the relationship between the nurses' perceived image of a nurse (NP-IN) and job satisfaction among nurses.

Nurse practice environment and professionalism (NPE,Prof)

H13a3-H22a3	There is a significant moderation effect of demographic variables on the relationship between nurse practice environment and professionalism among nurses.
H13b3-H22b3	There is a significant moderation effect of demographic variables on the relationship between nurse practice environment and professionalism among nurses.
H13c3-H22c3	There is a significant moderation effect of demographic variables on the relationship between nurse practice environment and professionalism among nurses.
H13d3-H22d3	There is a significant moderation effect of demographic variables on the relationship between nurse practice environment and professionalism among nurses.

Emotional intelligence and professionalism (EI,Prof)

H13a4-H22a4	There is a significant moderation effect of demographic variables on the relationship between emotional intelligence and professionalism among nurses.
H13b4-H22b4	There is a significant moderation effect of demographic variables on the relationship between emotional intelligence and professionalism among nurses.
H13c4-H22c4	There is a significant moderation effect of demographic variables on the relationship between emotional intelligence and professionalism among nurses.
H13d4-H22d4	There is a significant moderation effect of demographic variables on the relationship between emotional intelligence and professionalism among nurses.

Nurse practice environment and job satisfaction(NPE,J_sat)

H13a5-H22a5	There is a significant moderation effect of demographic variables on the relationship between nurse practice environment and job satisfaction among nurses.
H13b5-H22b5	There is a significant moderation effect of demographic variables on the relationship between nurse practice environment and job satisfaction among nurses.
H13c5-H22c5	There is a significant moderation effect of demographic variables on the relationship between nurse practice environment and job satisfaction among nurses.
H13d5-H22d5	There is a significant moderation effect of demographic variables on the relationship between nurse practice environment and job satisfaction among nurses.

Emotional intelligence and job satisfaction (EI,J_sat)

H13a6-H22a6	There is a significant moderation effect of demographic variables on the relationship between emotional intelligence and job satisfaction among nurses.
H13b6-H22b6	There is a significant moderation effect of demographic variables on the relationship between emotional intelligence and job satisfaction among nurses.
H13c6-H22c6	There is a significant moderation effect of demographic variables on the relationship between emotional intelligence and job satisfaction among nurses.
H13d6-H22d6	There is a significant moderation effect of demographic variables on the relationship between emotional intelligence and job satisfaction among nurses.

Job satisfaction and professionalism (J_sat,Prof)

H13a7-H22a7	There is a significant moderation effect of demographic variables on the relationship between job satisfaction and professionalism among nurses.
H13b7-H22b7	There is a significant moderation effect of demographic variables on the relationship between job satisfaction and professionalism among nurses.
H13c7-H22c7	There is a significant moderation effect of demographic variables on the

relationship between job satisfaction and professionalism among nurses.

H13d7-H22d7   There is a significant moderation effect of demographic variables on the relationship between job satisfaction and professionalism among nurses.

Moderating effects is the effect of another third variable altering the relationship between two other constructs. The relationship between two variables alters based on the amount/level of the moderator. Moderation involves testing of structural model estimates, and is thus considered as an extension of multi-group analysis.

Multi-group analysis is a type of SEM analysis in which two or more samples of participants are compared using similar models. Assessment of similarities between groups is done using between groups constraints on any model parameter(s). The broad objective is to find if there is a difference between individual structural group models. Group model comparisons identify the degree of difference for the entire model or a specific path or relationship.

The basis of this process is the series of empirical comparison of models with increasingly restricted constraints. The crucial measure of difference considered is the chi square difference which allows for the overall comparison between two structural model specifications, i.e. one without and the other with constraints. Chi Square difference with degrees of freedom equal to the measure of constrained loading estimates across groups provides for assessment at statistically significant levels. An insignificant between group constraint indicates that the parameter being estimated does not vary between groups. Generally, the process is as follows:

a. Estimation of separate and unique path estimates for each individual group with the most unconstrained model or totally free (TF) model.

b. Estimation of specific group model comparison by adding between group constraints/full constraints (FC) or by constraining the path estimate of interest to be equal between groups. The between group constraint estimates a unique parameter for each group, rather than estimating a single parameter for the relationship.

c. Differences between models are compared using a chi-square difference test which indicates if there is a significant decrease in the model fit (increase in the

chi-square) after the estimates are constrained to be equal. A difference between models (TF and FC models) that is statistically significant indicates difference in the path estimates and signifies that moderation does exist. Thus the researcher looks out for significant differences among the models and seeks support to the hypothesis signifying differences in the path estimates.

This study examines the moderation effects of the demographic variables on the relationship between the determinants, job satisfaction and professionalism among nurses. Using multi group SEM in Amos, the groups are created for the respective demographic variables. The structural model estimates of the groups are tested for metric invariance among group model estimates. The Chi square difference test is used to compare the unconstrained model (TF) with the fully constrained model (FC) by adding between group constraints. The probability levels are set at 10%, 5% and 1% level of significance.

This study aims to explore the moderation effects of the demographic variables such as age, gender, marital status, religion, qualification, area of work, employment status, experience, level and sector of health care organisation on the relationship between the determinants and job satisfaction and determinants and professionalism among nurses. The tested model(s) and paths are shown in Figure 7.15.

Fig. 7.15. Tested Models and Paths for Moderation Effect
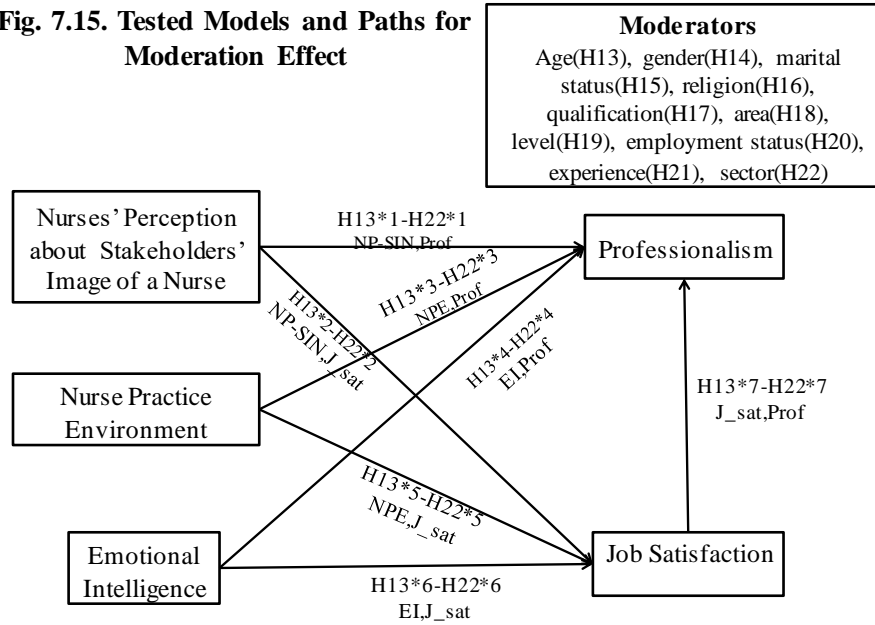
* Indicates the path in the four reference models (a, b, c, d) with the variable measuring respective nurses' perception about the stakeholders' image of a nurse.

Table 7.26 : Moderation effect based on Standard Regression Weights

Objective 7: H13- H22. Moderation role of Demographics

Over model/ Path by Path	Age H13 1:20-30yrs 2:30-40 yrs 3:40-50 yrs 4:50-60 yrs	Gender H14 M:Male F:Female	Marital status H15 M:Married S:Single	Religion H16 C:Christian H:Hindu M:Muslim	Qualification H17 G:GNM B: B.Sc. M: M.Sc.	Area H18 M:Med S:Surg O:OBG P:Ped E:Emergency Ps:Psychiatry C:Com	Level H19 T:Tertiary S:Secondary P:Primary	Empl. Status H20 P:Permanent T:Temporary	Experience H21 N:Novice C:Competent E:Expert	Sector H22 P:Private G:Govt A:Autonomous
	H13a	**H14a**	**H15a**	**H16a**	**H17a**	**H18a**	**H19a**	**H20a**	**H21a**	**H22a**
Overall model 'a' (NP-DIN) "a"	.832 NS	.894 NS	.420 NS	**.003** (S)	.102 NS	**.000 (S)**	.269 NS	.578 NS	.145 NS	**.003 (S)**
	H13a1	**H14a1**	**H15a1**	**H16a1**	**H17a1**	**H18a1**	**H19a1**	**H20a1**	**H21a1**	**H22a1**
NP-DIN,prof	NS	NS	NS	**.01 (S) C>H>M**	**.10 (S) B>G>M**	**.05 (S) P>S>E>M>Ps >C>O**	NS	NS	NS	**.05 (S) A>P>G**
	H13a2	**H14a2**	**H15a2**	**H16a2**	**H17a2**	**H18a2**	**H19a2**	**H20a2**	**H21a2**	**H22a2**
NP-DIN,J_sat	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	H13a3	**H14a3**	**H15a3**	**H16a3**	**H17a3**	**H18a3**	**H19a3**	**H20a3**	**H21a3**	**H22a3**
NPE,Prof	NS	NS	NS	**.10 (S) M>H>C**	**.10 (S) G>M>B**	NS	NS	NS	NS	NS
	H13a4	**H14a4**	**H15a4**	**H16a4**	**H17a4**	**H18a4**	**H19a4**	**H20a4**	**H21a4**	**H22a4**
EI,Prof	NS	NS	NS	NS	NS	**.10 (S) PS>O>C>P>S >E>M**	NS	NS	NS	NS

Over model/ Path by Path	Age H13 1:20-30yrs 2:30-40 yrs 3:40-50 yrs 4:50-60 yrs	Gender H14 M:Male F:Female	Marital status H15 M:Married S:Single	Religion H16 C:Christian H:Hindu M:Muslim	Qualification H17 G:GNM B: B.Sc. M: M.Sc.	Area H18 M:Med S:Surg O:OBG P:Ped E:Emergency Ps:Psychiatry C:Com	Level H19 T:Tertiary S:Secondary P:Primary	Empl. Status H20 P:Permanent T:Temporary	Experience H21 N:Novice C:Competent E:Expert	Sector H22 P:Private G:Govt A:Autonomous
	H13a5	**H14a5**	**H15a5**	**H16a5**	**H17a5**	**H18a5**	**H19a5**	**H20a5**	**H21a5**	**H22a5**
NPE, J_sat	NS	NS	**.10 (S)** **S>M**	NS	NS	**.05 (S)** **E>M>S>P>O >Ps>C**	NS	**.10 (S)** **T>P**	**.01 (S)** **N>C>E**	**.01 (S)** **A>G>P**
	H13a6	**H14a6**	**H15a6**	**H16a6**	**H17a6**	**H18a6**	**H19a6**	**H20a6**	**H21a6**	**H22a6**
EI, J_sat	NS	NS	NS	NS	**.05 (S)** **M>B>G**	**.01 (S)** **O>Ps>M>C> E>S>P**	NS	NS	NS	NS
	H13a7	**H14a7**	**H15a7**	**H16a7**	**H17a7**	**H18a7**	**H19a7**	**H20a7**	**H21a7**	**H22a7**
J_sat,Prof	NS	NS	NS	NS	NS	NS	NS	NS	NS	**.10 (S)** **A>P>G**
	H13b	**H14b**	**H15b**	**H16b**	**H17b**	**H18b**	**H19b**	**H20b**	**H21b**	**H22b**
Overall model 'b' (NP-PIN)	.827 NS	.665 NS	.493 NS	**.000 (S)**	.116 NS	**.000 (S)**	.191 NS	.598 NS	.145 NS	**.003 (S)**
	H13b1	**H14b1**	**H15b1**	**H16b1**	**H17b1**	**H18b1**	**H19b1**	**H20b1**	**H21b1**	**H22b1**
NP-PIN,Prof	NS	NS	NS	**.01 (S)** **M>C>H**	**.10 (S)** **B>G>M**	NS	NS	NS	NS	**.05 (S)** **A>P>G**
	H13b2	**H14b2**	**H15b2**	**H16b2**	**H17b2**	**H18b2**	**H19b2**	**H20b2**	**H21b2**	**H22b2**
NP-PIN,J_sat	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	H13b3	**H14b3**	**H15b3**	**H16b3**	**H17b3**	**H18b3**	**H19b3**	**H20b3**	**H21b3**	**H22b3**

Over model/ Path by Path	Age H13 1:20-30yrs 2:30-40 yrs 3:40-50 yrs 4:50-60 yrs	Gender H14 M:Male F:Female	Marital status H15 M:Married S:Single	Religion H16 C:Christian H:Hindu M:Muslim	Qualification H17 G:GNM B: B.Sc. M: M.Sc.	Area H18 M:Med S:Surg O:OBG P:Ped E:Emergency Ps:Psychiatry C:Com	Level H19 T:Tertiary S:Secondary P:Primary	Empl. Status H20 P:Permanent T:Temporary	Experience H21 N:Novice C:Competent E:Expert	Sector H22 P:Private G:Govt A:Autonomous
NPE,Prof	NS	NS	NS	.10 (S) M>H>C	.05 (S) M>G>B	NS	NS	NS	NS	NS
	H13b4	H14b4	H15b4	H16b4	H17b4	H18b4	H19b4	H20b4	H21b4	H22b4
EI,Prof	NS	NS	NS	.010 (S) H>C>M	NS	NS	NS	NS	NS	NS
	H13b5	H14b5	H15b5	H16b5	H17b5	H18b5	H19b5	H20b5	H21b5	H22b5
NPE, J_sat	NS	NS	.10 (S) S>M	NS	NS	.05 (S) E>M>S>P>O >PS>C	NS	.10 (S) T>P	.01 (S) N>C>E	.01 (S) A>G>P
	H13b6	H14b6	H15b6	H16b6	H17b6	H18b6	H19b6	H20b6	H21b6	H22b6
EI, J_sat	NS	NS	NS	NS	.05 (S) M>B>G	.010 (S) O>Ps>M>C> E>S>P	NS	NS	NS	NS
	H13b7	H14b7	H15b7	H16b7	H17b7	H18b7	H19b7	H20b	H21b7	H22b7
J_sat,Prof	NS	NS	NS	NS	.10 (S) M>B>G	NS	NS	NS	NS	.10 (S) A>P>G
	H13c	H14c	H15c	H16c	H17c	H18c	H19c	H20c	H21c	H22c
Overall model 'c' (NP-OHSIN)	.864 NS	.703 NS	.578 NS	.037(S)	.233 NS	.000 (S)	.146	.551 NS	.145 NS	.010 (S)
	H13c1	H14c1	H15c1	H16c	H17c1	H18c1	H19c1	H20c1	H21c1	H22c1

Over model/ Path by Path	Age H13 1:20-30yrs 2:30-40 yrs 3:40-50 yrs 4:50-60 yrs	Gender H14 M:Male F:Female	Marital status H15 M:Married S:Single	Religion H16 C:Christian H:Hindu M:Muslim	Qualification H17 G:GNM B: B.Sc. M: M.Sc.	Area H18 M:Med S:Surg O:OBG P:Ped E:Emergency Ps:Psychiatry C:Com	Level H19 T:Tertiary S:Secondary P:Primary	Empl. Status H20 P:Permanent T:Temporary	Experience H21 N:Novice C:Competent E:Expert	Sector H22 P:Private G:Govt A:Autonomous
NP-OHSIN,Prof	NS	NS	NS	.05 (S) H>C>M	NS	NS	NS	NS	NS	.10 (S) A>P>G
NP-OHSIN,J_sat	H13c2	H14c2	H15c2	H16c2	H17c2	H18c2	H19c2	H20c2	H21c2	H22c2
	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
NPE,Prof	H13c3	H14c3	H15c3	H16c3	H17c3	H18c3	H19c3	H20c3	H21c3	H22c3
	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
EI,Prof	H13c4	H14c4	H15c4	H16c4	H17c4	H18c4	H19c4	H20c4	H21c4	H22c4
	NS	NS	NS	NS	NS	.10 (S) Psy>O>C>P>S>E>M	NS	NS	NS	NS
NPE, J_sat	H13c5	H14c5	H15c5	H16c5	H17c5	H18c5	H19c5	H20c5	H21c5	H22c5
	NS	NS	.10 (S) S>M	NS	NS	.05 (S) E>M>S>P>O>PS>C	NS	.10 (S) T>P	.01 (S) N>C>E	.01 (S) A>G>P
EI, J_sat	H13c6	H14c6	H15c6	H16c6	H17c6	H18c6	H19c6	H20c6	H21c6	H22c6
	NS	NS	NS	NS	.05 (S) M>B>G	.01 (S) O>PS>M>C>E>S>P	NS	NS	NS	NS
J_sat,Prof	H13c7	H14c7	H15c7	H16c7	H17c7	H18c7	H19c7	H20c7	H21c7	H22c7
	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	H13d	H14d	H15d	H16d	H17d	H18d	H19d	H20d	H21d	H22d

Over model/ Path by Path	Age H13 1:20-30yrs 2:30-40 yrs 3:40-50 yrs 4:50-60 yrs	Gender H14 M:Male F:Female	Marital status H15 M:Married S:Single	Religion H16 C:Christian H:Hindu M:Muslim	Qualification H17 G:GNM B: B.Sc. M: M.Sc.	Area H18 M:Med S:Surg O:OBG P:Ped E:Emergency Ps:Psychiatry C:Com	Level H19 T:Tertiary S:Secondary P:Primary	Empl. Status H20 P:Permanent T:Temporary	Experience H21 N:Novice C:Competent E:Expert	Sector H22 P:Private G:Govt A:Autonomous
Overall model 'd' (NP-IN)	.566 NS	.864 NS	.485 NS	.197 NS	.130 NS	**.000 (S)**	.137 NS	.589 NS	.145 NS	**.007 (S)**
NP-IN,Prof	**H13d1** NS	**H14d1** NS	**H15d1** NS	**H16d1** NS	**H17d1** NS	**H18d1** .01 (S) O>S>C>M>P >Ps>E	**H19d1** NS	**H20d1** NS	**H21d1** NS	**H22d1** .05 (S) A>P>G
NP-IN,J_sat	**H13d2** NS	**H14d2** NS	**H15d2** NS	**H16d2** NS	**H17d2** NS	**H18d2** NS	**H19d2** NS	**H20d2** NS	**H21d2** NS	**H22d2** NS
NPE,Prof	**H13d3** NS	**H14d3** NS	**H15d3** NS	**H16d3** .05 (S) M>H>C	**H17d3** .10 (S) G>B>M	**H18d3** NS	**H19d3** NS	**H20d3** NS	**H21d3** NS	**H22d3** NS
EI,Prof	**H13d4** NS	**H14d4** NS	**H15d4** NS	**H16d4** NS	**H17d4** NS	**H18d4** .10 (S) Ps>O>Com>P >S>E>M	**H19d4** NS	**H20d4** NS	**H21d4** NS	**H22d4** NS
NPE, J_sat	**H13d5** NS	**H14d5** NS	**H15d5** .10 (S) S>M	**H16d5** NS	**H17d5** NS	**H18d5** .05 (S) E>M>S>P>O >Psy>C	**H19d5** NS	**H20d5** .10 (S) T>P	**H21d5** .01 (S) N>C>E	**H22d5** .01 (S) A>G>P

Over model/ Path by Path	Age H13 1:20-30yrs 2:30-40 yrs 3:40-50 yrs 4:50-60 yrs	Gender H14 M:Male F:Female	Marital status H15 M:Married S:Single	Religion H16 C:Christian H:Hindu M:Muslim	Qualification H17 G:GNM B: B.Sc. M: M.Sc.	Area H18 M:Med S:Surg O:OBG P:Ped E:Emergency Ps:Psychiatry C:Com	Level H19 T:Tertiary S:Secondary P:Primary	Empl. Status H20 P:Permanent T:Temporary	Experience H21 N:Novice C:Competent E:Expert	Sector H22 P:Private G:Govt A:Autonomous
	H13d6	**H14d6**	**H15d6**	**H16d6**	**H17d6**	**H18d6**	**H19d6**	**H20d6**	**H21d6**	**H22d6**
EI, J_sat	NS	NS	NS	NS	.05 (S) M>B>G	.010 (S) O>Ps>M>C> E>S>P	NS	NS	NS	NS
J_sat,Prof	**H13d7**	**H14d7**	**H15d7**	**H16d7**	**H17d7**	**H18d7**	**H19d7**	**H20d7**	**H21d7**	**H22d7**
	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

*'S' Model/path is significant. **NS are models/paths that are not significant. The obtained path Chi-square value is below the Chi-square threshold value for the confidence threshold level, hence not significant.

Testing for moderation effects of the demographic variables; **age, gender and level of health care organisation** and comparing the chi-square/df (X^2/df) of totally free models with the fully constrained models did not demonstrate significant differences which shows that there is no significant decrease in the model fit or increase in the chi square after the estimates are constrained to be equal. This signifies that these variables have no significant moderating effect on the overall model or on any specific path or relationship between the determinants and job satisfaction, nor on relationships between the determinants and professionalism among nurses. Hypothesis, **H13, H14** and **H19** are not supported.

In Hypothesis, **H15**, the demographic variable, **marital status** has no significant moderating effect on the overall model, however, there is statistically significant moderating effect on the relationship between nurse practice environment and job satisfaction (NPE,J Sat) in all the four models, Model 'a', X^2/df =10.88/3, P < .10; Model 'b', X^2/df = 6.411/3 P < .10; and Model 'c', X^2/df =6.172/3, P < .10; Model 'd', X^2/df = 8.712/3, P < .10). Based on the standard regression weights the relationship between the nurse practice environment and job satisfaction is found to be stronger for single or unmarried nurses (.557) as compared to the married nurses (.550).

In Hypothesis, **H16**, it is found that the demographic variable **religion** has statistically significant moderating effect on the overall Model 'a' (X^2/df = 26.662/10; P<.003); Model 'b' (X^2/df = 32.959/10; P<.000); and Model 'c' (X^2/df = 19.226/10; P<.037) except in Model 'd'. The relationship between the nurse practice environment and professionalism (NPE, Prof) is significantly moderated by **religion** (Model 'a' X^2/df =27.403/8, P < .10; Model 'b' X^2/df = 30.660/8, P < .10; Model 'd' X^2 /df = 18.732/5, P < .050). However this relationship is not moderated in Model-D3. The relationship is found to be stronger for Muslim nurses as compared to Hindu which is stronger as compared to Catholic nurses; [Model-D2 .223(M), .213(H), .210(C); Model-D1.251(M), .228(H), .225(C) and Model-D4-.227(M), .250(H), .244(H)]. The relationship between nurses' perception about the stakeholders' image of a nurse and professionalism (I, Prof) is also statistically moderated by religion, (Model 'a' X^2/df = 36.584/8, P < .01, Model 'b' X^2/df = 46.809/8, P < .01, Model 'c' X^2/df = 24.091/8, P < .05). Based on the standardized regression weights, for nurses' perception about

doctors' image of a nurse the relationship is found to be stronger for the Catholic nurses (.153) as compared to Hindus (.151) than as compared to Muslim nurses (.117). For nurses' perception about patients' image of a nurse the relationship is stronger for the Muslim nurses (.150) as compared to Catholic (.129) and Hindus nurses (.129). For nurses' perception about other hospital staffs' image of a nurse the relationship is stronger for the Hindus nurses (.169) as compared to Catholic (.157) than as compared to Muslim nurses (.148). In Model 'b', religion is also found to moderate the relationship between emotional intelligence and professionalism (EI,Prof) $X^2/df = 38.936/8$, P < .01, wherein the relationship is stronger for Hindu nurses (.230) as compared to Catholic nurses (.210) than as compared to Muslim nurses (.191).

In Hypothesis, **H17**, **Qualification** is found to have no statistically significant moderating effect on the overall models, however does significantly moderate the paths NPE,Prof in all the models (Model 'a' $X^2/df = 15.341/5$, P < .10, Model 'b' $X^2/df = 13.838/5$, P < .05; Model 'd' $X^2/df = 18.356/5$, P < .10,) except in the model including Model 'c'. In Model 'a' and Model 'd', the relationship is stronger for nurses with General nursing and midwifery (.160 and .180), than for nurses with B. Sc. (.159 and .171) than for M. Sc. qualified nurses (.153 and .170). Qualification is also found to have statistically significant moderating effect on the path D_I, Prof with $X^2/df = 14.804/5$, P < .10 and P_I, Prof with $X^2/df = 10.527/5$, P < .10. In Model 'a' and Model 'b', this relationship is found to be stronger for the B.Sc (.133 and .118) as compared to nurses with General nursing and midwifery (.124 and .110) and as compared to nurses with M. Sc. Nursing qualification (.105 and .105). In all the models qualification also moderates the relationship between emotional intelligence and job satisfaction, (EI,J sat) (Model-D1 $X^2/df = 17.172/5$, P < .05, Model-D2 $X^2/df = 13.240/5$, P < .05 and Model-D3 $X^2/df = 11.807/5$, P < .05; Model-D4 $X^2/df = 20.162/5$, P < .05). In all the four models the relationship is stronger among the M.Sc. qualified nurses (.174) as compared to the B. Sc. (.146) and the General nurses and midwives (.144). In Model-D2, the path J Sat,Prof is also moderated by qualification ($X^2/df = 10.538/5$, P < .10) with M. Sc. qualified nurses (.166) having stronger relation as compared to B. Sc. (.141) and GNM nurses (.137).

In Hypothesis, **H18**, **Area of work** is found to display statistically significant moderation effects at the overall model level in all the four models (Model 'a' X^2/df = 69.767/30, P < .000, Model 'b' X^2/df = 53.946/24, P <.000 and Model 'c' X^2/df = 64.482/30, P < .000; Model 'd' X^2/df = 74.279/30, P < .000). This variable is also found to moderate the relationship between perception of image and professionalism among nurses in Model 'a' (X^2/df = 54.003/20, P < .05) and Model 'd' (X^2/df = 58.237/20, P < .01). In Model 'a' the relationship is stronger for those working in Paediatrics (.147) as compared to those in Surgery (.142), Emergency/OT/ICU (.136), Medicine (.135), Psychiatry (.134) and Community (.133) and least for those working in Obstetrics and Gynaecology (.128), whereas in Model 'd', the relationship is stronger for nurses working in Obstetrics and Gynaecology (.128), as compared to those in Surgery (.127), Community (.124), Medicine (.121), Paediatrics (.116), Psychiatry (.113) as compared to those working in Emergency/OT and /or Intensive care units (.106). The path between emotional intelligence and professionalism is moderated by area of work in Model 'a' (X^2/df = 50.180/20, P < .10), Model 'c' (X^2/df = 42.854/20, P < .10) and Model 'd' (X^2/df = 49.074/20, P < .10), except in Model 'b'. The relationship is stronger for nurses working in the Psychiatric area (.299, .293 and .309) than those in Obstetrics and Gynaecology (.264 .257 and .277) than Community (.247, .240 and .257), Paediatrics (.232, .225 and .241), Surgery (.228, .222 and .237), Emergency/OT/ICU (.225, .220 and .234) and is least for Medicine (.209, .204 and .217) respectively. The relationship between nurse practice environment and job satisfaction is also moderated by area of work in all the models (Model 'a' X^2/df = 51.966/20, P < .05, Model 'b' X^2/df = 63.197/27/13, P < .05 and Model 'c' X^2/df = 43.932/20, P < .05; Model 'd' X^2/df = 50.869/20, P < .05). This relationship is stronger for nurses in the Emergency/OT/ICU (.596), Medicine (.547), Surgery (.545), Paediatrics (.533), Obstetrics and Gynaecology (.518), Psychiatry (.492) and least for those working in Community (.451). The path between emotional intelligence and job satisfaction is also significantly moderated by the area of work (Model 'a' X^2/df = 64.730/20, P < .01, Model 'b' X^2/df = 76.020/27, P < .01,and Model 'c' X^2/df = 56.755/20, P < .01; Model 'd' X^2/df = 63.693/20, P < .01) with the nurse from Obstetrics and Gynaecology having stronger relationship (.163) as compared to Psychiatry (.147), Medicine (.141), Community (.139), Emergency/OT/ICU (.130), Surgery (.129) and Paediatrics (.117).

In Hypothesis, **H20**, Although, **employment status** of nurses does not moderate the relationships at model level, it has statistically significant moderation effects on the path NPE,J Sat in all four models (Model 'a' $X^2/df = 10.214/3$, P < .10, Model 'b' $X^2/df = 6.038/3$, P < .10, and Model 'c' $X^2/df = 5.422/3$, P < .10; Model 'd' $X^2/df = 6.693/3$, P < .10) with temporarily employed nurses (.577) having a stronger relationship as compared to the permanently employed (.557).

In Hypothesis, **H21**, **years of experience**, although does not significantly moderate at overall model level, it does significantly moderate the path NPE, J Sat in all four models (Model 'a' $X^2/df = 35.722/8$, P < .01, Model 'b' $X^2/df = 27.041/8$, P < .01 and Model 'c' $X^2/df = 33.388$, P < .010; Model 'd' $X^2/df = 30.064/8$, P < .01) wherein this relationship for novice nurses (.573) is stronger than for the competent (.564) and expert nurses (.563).

In Hypothesis, **H22**, **Sector of organisation** is found to moderate at the model level (Model 'a' $X^2/df = 29.605/12$, P < .028, Model 'b' $X^2/df = 29.624/12$, P < .028, and Model 'c' $X^2/df = 26.082/12$, P < .010; Model 'd' $X^2/df = 27.345/12$, P < .007) as well as certain path level. The moderation on the relationship between the perception of image and professionalism is statistically significant in Model-D1($X^2/df = 15.870/5$, P < .05),Model-D2($X^2/df = 20.421/5$, P < .05), Model-D3 ($X^2/df = 10.044/5$, P < .10), and Model-D4 ($X^2/df = 12.354/5$, P < .05) wherein the relationship is stronger for nurses working in autonomous sector (.178, .166, .231 and .155) as compared to the private (167, .142, .181 and .145) and government sector (.137, .119, 162 and .123) respectively. The path NPE,J Sat is moderated in all the four models (Model 'a' $X^2/df = 18.328/5$, P < .01, Model 'b' $X^2/df = 22.864/5$, P < .01, and Model 'c' $X^2/df = 16.206/5$, P < .010; Model 'd' $X^2/df = 16.837/5$, P < .01). This relationship is stronger for the nurses working in the autonomous sector (563), as compared to those in the government (561) and private (556) sector.

CHAPTER 8

DISCUSSION

This chapter unveils the summary of the findings of the research study, provides discussion on the findings in relation to previous research. The primary focus of this study was to identify the influence of the determinants on professionalism among nurses. Social cognitive theory which focuses on the dynamic relationship between the personal, environmental and behavioural determinants resulting in behavioural outcomes served as the ground for the overall endeavour in this research. Nurses' perception about the stakeholders' image of a nurse was considered as a social environmental determinant, the nurse practice environment as the physical environmental determinant, emotional intelligence of the nurse as the personal determinant and professionalism among registered nurses as the behavioural outcome. This study also examined the interaction effects of the determinants on professionalism among nurses. Since this study aimed to explore the mediating role of job satisfaction on the relationship between the determinants and professionalism, the influence of the determinants on job satisfaction is also tested. Earlier researchers identified that the demographic factors of nurses have influence on their level of professionalism. Hence, nurses' demographic factors are studied for their moderating influence across different relationships.

Findings and Discussion

Data collected from 749 registered nurses was entered and analysed using IBM SPSS version 25. Advanced analysis of data, development of measurement models and structural models is done by using of Structural Equation Modeling (SEM) technique in AMOS software Version 22.

The results of the analysis based on the objectives detailed in chapter 7 are discussed under the following content:

8.1 OBJECTIVE 1. DIFFERENCE IN THE NURSES' PERCEPTION ABOUT STAKEHOLDERS' IMAGE OF A NURSE

Testing for difference among and within subjects using repeated measures ANOVA

This construct was explored by several researchers who have reported varied findings. Though public presented positive image of nurses, hospital employees graded nurses negatively and similar to the nurses themselves (Song, 1993). Community members; historically black residential areas in KwaZulu-Natal rated the nurses as very good or good (Kunene, Nzimande, & Ntuli, 2001). General public reported positive professional view of nurses (Lam, 2005). Nurses themselves, do not hold positive self-image which is consistent with public image (Fletcher, 2007; Abdelrahman, 2018). This is contradicted by Siebens et al., (2006) and Takase, Maude, & Manias, (2006). Nurses' image differed according to the departments; department of nursing had the most positive image, followed by physical therapy, radiology, emergency medical technology and least by clinical pathology (Seo, 2009). Image of nurses was low among second and third year nursing students (Jeong & Yoo, 2010). Slovenian newspapers presented a relatively positive image of nurses (Popović & Pahor, 2011). Nurses' appraisal was lower among patients as well as among doctors as compared to the appraisal by nurses themselves (Włodarczyk & Tobolska, 2011). Patients visiting acute care units of private hospitals in South Africa described positive image of nurses (Tonder & Van Wyk, 2011; Meiring, & Van Wyk, 2013). However, the South African newspapers presented negative images of nurses (Oosthuizen, 2012). Self perceptions of nurses' image were higher than perceived public image among nurses (Mostafa, 2013). Hoeve, Jansen, & Roodbol (2014) discussed that the actual public image of nurses is varied and incongruous.

Nurses serve as the most significant members of the multidisciplinary health care team across all health care settings; hence identification of this construct with reference to varied stakeholders was considered important. The common understanding holds that doctors are all powerful, authoritative and knowledgeable but nurses' are less professional subordinates, merely following doctors' orders. Nursing is not even considered as a professional career. The perception of nurse image by different stakeholders is inter-connected. Nurses' perception about their

image by various stakeholders influences their thought, actions and particularly interpersonal and professional relations in the team. It is important to understand doctors' image of a nurse, because a trustworthy and respectful relationship between the nurses and doctors, facilitates effective communication and promotes confidence. This further endorses efficient nursing care practices and significantly influences patient care outcomes. Patients', as well as other hospital staffs' image of a nurse is important as it can be a powerful tool which directly and quickly extends the nurses' image throughout the community. This image has the potential to stimulate prospective new entrants into the profession as well as influence the recruitment, performance and retention of these professionals. Positive stakeholders' image in conjunction with the positive nurses' perceived image of a nurse is associated with enhanced self-esteem, fruitful interpersonal relations among the team and improved job satisfaction leading to productive participation in decision making, maintaining standards of practice and improvement in patients' satisfaction. This is a cyclic process that props up the image of a nurse.

In this study, this construct was considered as a social environmental determinant and was captured with reference to four different stakeholders:

a. Nurses' perception about doctors' image of a nurse (NP-DIN),
b. Nurses' perception about patients' image of a nurse (NP-PIN),
c. Nurses' perception about other hospital staffs' image of a nurse (NP-OHSIN),
d. Nurses' perceived image of a nurse (NP-IN).

Data collected from the respondents and tested in terms of mean and standard deviation 53.2243 ± 6.49972 (NP-DIN), 51.9186 ± 6.89358 (NP-PIN), 53.0574 ± 6.78514 (NP-OHSIN), 58.3685 ± 6.91084 (NP-IN) as well as the repeated measures ANOVA, with Huynh-Feldt correction indicated the difference in the nurses' perception about image of a nurse with respect to doctors, patients, other hospital staff and self; $F(2.625, 1963.5) = 352.656$, $p < .000$, $R2 = .32$.

The findings of this study indicate that there is a difference in the nurses' perception about the stakeholders' image of a nurse. Nurses' perceived image was more positive as compared to the nurses' perception about doctors' image of a nurse,

followed by nurses' perception about other hospital staffs' image of a nurse. The rating, though positive was lowest on nurses perception about patients' image of a nurse. This research identified the difference in the nurses' perception about the image of a nurse with reference to multiple stakeholders in this study.

8.2   TESTING OF HYPOTHESIS USING STRUCTURAL EQUATION MODELING

The result obtained as AMOS output that is used to test the hypotheses is based on "Standardized Regression Weights" and Probability Value (P) or level of significance at $p< 0.01$ and $p< 0.05$. Interaction moderation analysis in SEM is used for testing the interaction effects of the determinants on professionalism (H9-H11). Chi-square/df difference test is used in testing the hypotheses H13-H22 which signifies the moderating effect of the demographic variables at 1%, 5% and 10% level of significance.

The relationships examined are presented and discussed under the following headings:

1.   Influence of determinants on professionalism among nurses.
2.   Influence of determinants on job satisfaction among nurses.
3.   Influence of job satisfaction on professionalism among nurses.
4.   Interaction effects of the determinants on professionalism among nurses.
5.   Mediating effects of job satisfaction.
6.   Moderation effects of demographic variables.

8.2.1   Objective 2. Influence of determinants on professionalism among nurses

Takase (2000) identified that the degree of nurses' job performance bears a weak negative correlation with the degree of the discrepancy between the perceived public image of nurses and nurses' self-concept. Takase, Maude, & Manias (2006) found that nurse leaders' self-image positively influences their organizational job performance, whereas their perceived public image does not. Mostafa (2013) reported strongest correlation between students' as well as nurses' perception of self-image and task performance. Fantahun et al., (2014) in a focus group discussion reported that

nurses' account society's view of nursing profession as one among the key factors affecting professionalism. Solomon, Beker, & Belachew (2015) found self image as one among the predictors of level of professionalism in nursing. Kim & Kim (2016) identified positive correlation between students' perceived image of a nurse and professionalism.

A limited number of studies have been identified that have explored the influence of nurse practice environment on professionalism. Manojlovich & Ketefian (2002) and Solomon, Beker, & Belachew (2015) identified organizational culture as one of the predictors of professionalism in nursing. Manojlovich (2005) also found structural empowerment, an environmental factor as contributing to professional practice behaviours among nurses and Livsey (2009) identified a similar influence among students. Fantahun et al., (2014) through focus group discussion, identified that workload and lack of support are some among the key factors affecting professionalism. Aron (2015) reported staff scheduling and work-load as significant factors affecting delivery of quality nursing care.

Carmeli (2003) identified that emotional intelligence boosts altruistic behaviour and work outcomes, and moderates the relation between work-family conflicts among hospital nurses. Prati et al., (2003) found relation between emotional intelligence and nursing performance. Emotional intelligence has been identified as a chief predictor of essential organizational outcomes (Guleryuz, Guney, Aydın, & Asan, 2008); Kafetsios & Zampetakis (2008) and Beauvais, Brady, O'Shea, & Griffin (2011). Deshpande & Joseph (2009) revealed significant impact of emotional intelligence of peers on the ethical behaviour of nurses. Smith, Profetto-McGrath, & Cummings (2009) discussed the significant influence of emotionally intelligent leaders on employee retention, patient care quality and patient outcomes. Kaur, Sambasivan. & Kumar (2015) identified the impact of EI on nurses' caring behavior and the respectful deference towards others. Contradictory, Latif, Majoka & Khan (2017) revealed that emotional intelligence is a poor predictor of job performance among teachers.

In this study, Nurses' perception about doctors' image of a nurse [**H2a** (r = 0.172, P < 0.009)], nurse practice environment [**H3a** (r = 0.194,   P < 0.001)]

and emotional intelligence [**H4a** (r = 0.315, P < 0.001)] has significant positive influence on professionalism among these professionals.

Nurses' perception about patients' image of a nurse [**H2b** (r = 0.093, P < 0.137)] does not have a significant influence on professionalism among nurses. Nurse practice environment [**H3b** (r = 0.220, P < 0.001)] and emotional intelligence [**H4b** (r = 0.337, P < 0.001)] has significant positive influence on professionalism among these professionals.

Nurses' perception about other hospital staffs' image of a nurse [**H4c** (r = 0.128, P < 0.037)], nurse practice environment [**H5** (r = 0.196, P < 0.001)] and emotional intelligence [**H6** (r = 0.332, P < 0.001)] has significant positive influence on professionalism among these professionals.

Nurses' perceived image of a nurse [**H4d** (r = 0.089, P < 0.101)] does not have a significant influence on professionalism among nurses. Nurse practice environment [**H5** (r = 0.227, P < 0.001)] and emotional intelligence [**H6** (r = 0.339, P < 0.001)] has significant positive influence on professionalism among these professionals.

The findings indicated by the standardised regression weights explain that nurses' professionalism is greatly influenced by their emotional intelligence followed by the nurse practice environment and their perception about "doctors' as well as "other hospital staffs' image of a nurse", but not by their "perception about patients' image of a nurse" nor by their "self perceived image of a nurse".

These findings can be substantiated with explanation that emotional intelligence is an important talent, especially in nursing profession which necessitates the ability to appraise, regulate and manage own and others' emotions and the stressors in the day to day functioning and dealing with human lives. Emotional intelligent nurses are better able to exploit their critical thought processes, manage spontaneous situation based decision making and deal with stressful situations shrewdly. Hence this critical aptitude among the nurses greatly influences their professionalism.

To be able to function efficiently, supply of adequate resources, supervisors' and administrative support, staffing, collegial team relations and foundations for

quality nursing practice are vital, even for emotionally intelligent professionals. This explains the influence of nurse practice environment on professionalism among nurses.

Doctors and other hospital staff are always on one side as providers. Nurses constantly work together with doctors as well other hospital staff wherein they need cooperation, coordination and the acknowledgement of themselves by these team members as caring, skilful, intelligent, confident, friendly, competent, logical and honest professionals. Doctors and other hospital staff need to trust the nurses and have the confidence that these nurses can make independent and wise decisions, perform proficiently and in the best interest of the patients. Thus, positive nurses' perception about doctors' and other hospital staffs' image of a nurse significantly promotes higher levels of professionalism among nurses.

Patients are the consumers in the health care delivery system. They get admitted with varied reasons, varied stages of illness and conscious level, their primary focus is on the improvement in their health status. Once improved they get discharged and no longer remain in the health care team. Nurses need to carry out their professional responsibilities based on the situation and patients' health condition, sometimes irrespective of the nurse's perception about patients' image of a nurse. Hence their professional behaviour may not be much influenced by their perception about patients' image of a nurse and rather is influenced by their perception about doctors' and other hospital staffs' image of a nurse.

Higher levels of emotional intelligence, adequate level of nurse practice environment and positive "nurses' perception about doctors' and other hospital staffs image of a nurse" result in the demonstration of greater level of professionalism among nurses, irrespective of the "nurses' perception about the patients' as well as nurses' perceived image of a nurse."

8.2.2   Objective 3. Influence of determinants on job satisfaction among nurses

Previous researchers (Demir, Ulusoy, & Ulusoy, 2003; Applebaum et al., 2010; Duffield, Roche, Blay, & Stasa, 2011a; Almaliki, FitzGerald, & Clark, 2012; AbuAlRub, El-Jardali, Jamal, & Abu, 2015; Aron, 2015; Wang et al., 2015) have

found that nurse practice or work environment impacts nurses' job satisfaction. Facilities and working conditions are indentified as among the important factors affecting job satisfaction (Abbaschian, Avazeh, & SiahkaliS, 2011). Supervisor's behavior was known to have the strongest association with intrinsic satisfaction (Decker, Harris-Kojetin, & Bercovitz, 2009). However, nurses' report neither dissatisfaction nor satisfaction in their jobs, and nurses working in wards express faintly higher job satisfaction as compared to those working in critical care units (Mrayyan, 2006).

Guleryuz, Guney, Aydın, & Asan (2008) & Trivellas, Harris-Kojetin, & Bercovitz (2013) identified a significant positive relation between emotional intelligence and job satisfaction among nurses A similar finding was discussed by Ealias & George (2012) among employees of an international electronic firm. Emotional intelligence is an important predictor of job satisfaction among teachers (Kafetsios & Zampetakis, 2008; & Latif, Majoka, & Khan, 2017). On the contrary, extremely low, insignificant relationship between emotional intelligence and job satisfaction was identified among Spanish ceramic tile manufacturers' (Chiva & Alegre, 2008). There was no direct relationship between emotional intelligence and employees' job satisfaction among employees of the international electronic firm (Lee & Ok, 2012) and Carmeli (2003) found that emotional intelligence does not influence job satisfaction among senior finance managers in the government sector.

Tao, Ellenbecker, Wang, & Li (2015) reported that the major influences on job dissatisfaction are lack of respect and due recognition for the nurses' work. Takase (2000) identified that the degree of nurses' job satisfaction bears a weak negative correlation with the degree of the discrepancy between the perceived public image of nurses and nurses' self-concept using Pearson correlation.

In this study, Nurses' perception about doctors' image of a nurse [**H5a** ($r = 0.031$, $P < 0.579$)], does not significantly influence job satisfaction among nurses, however, nurse practice environment [**H6a** ($r = 0.628$, $P < 0.001$)] and emotional intelligence [**H7a** ($r = 0.156$, $P < 0.003$)] has significant positive influence on job satisfaction among these professionals.

Nurses' perception about patients' image of a nurse [**H5b** (r = -0.031, P < 0.571)] does not have a significant influence on job satisfaction among nurses. Nurse practice environment [**H6b** (r = 0.650, P < 0.001)] and emotional intelligence [**H7b** (r = 0.169, P < 0.001)] has significant positive influence on job satisfaction among these professionals.

Nurses' perception about other hospital staffs' image of a nurse [**H5c** (r = -0.062, P < 0.222)] does not have a significant influence on job satisfaction among nurses. Nurse practice environment [**H6c** (r = 0.654, P < 0.001)] and emotional intelligence [**H7c** (r = 0.182, P < 0.001)] has significant positive influence on job satisfaction among these professionals.

Nurses' perceived image of a nurse [**H5d** (r = -0.009, P < 0.854)] does not have a significant influence on job satisfaction among nurses. Nurse practice environment [**H6d** (r = 0.638, P < 0.001)] and emotional intelligence [**H7d** (r = 0.167, P < 0.002)] has significant positive influence on job satisfaction among these professionals.

The findings indicated by standardised regression weights explain that nurse practice environment has the greatest influence on job satisfaction among nurses followed by emotional intelligence. However, nurses' perception about stakeholders' image of a nurse does not significantly influence job satisfaction among nurses.

In order to meet the ever increasing needs and demands of the domestic as well as the rising migrant population, practically the "nurse practice environment" comprising of the ability, support and leadership of supervisors, also inclusive of healthy team relations and foundations for nursing quality of care that include administrative support in terms of orientation and in-service education programs, staff adequacy, resource availability and clarity in job description is mandatory. Deficiency or adequacy of these fundamental requirements influence the job satisfaction among provider nursing professionals which consequently influences the provision of nursing care and services to the consumers.

This study identified that emotional intelligence significantly influences job satisfaction. Every nurse experiences emotional situations in the process of providing routine care to the clients. Even amidst the stressful situations, nurses are obliged to

perform efficient and safe nursing care, absence of which can be detrimental to lives of clients. Nurses who enjoy higher emotional intelligence have greater ability in appreciating, understanding and regulating emotions, are able to adapt to the disappointments and frustrations, tend to develop productive strategies, experience positive moods and perform efficiently. Thus, the ability to handle the emotions of self and others and be able to perform productively appends to the job satisfaction of these professionals.

Poor social status of nurses' is generally a dissatisfying factor. However, in this study nurses perception about stakeholders' image of a nurse had no significant influence on job satisfaction. This finding is probably because nurses primarily focus on meeting the needs of the clients within the existing nurse practice environment. They also exploit their emotional intelligence to meet the ultimate professional goal; safety and satisfaction of their clients to the best possible level, wherein the perceived public image of nurse with respect to all stakeholders gets overshadowed. Hence this factor is not of much concern for these professionals in experiencing job satisfaction.

Hence, adequate level of nurse practice environment and higher levels of emotional intelligence result in experience of greater job satisfaction among nurses, irrespective of "nurses' perception about the stakeholders' image of a nurse."

8.2.3 Objective 4. Influence of job satisfaction on professionalism among nurses

Takase (2000) identified that job performance has statistically significant relationship with job satisfaction using the Pearson 'r'. Pearson & Moomaw (2005) identified an association between job satisfaction and degree of professionalism among teachers. Han, Kim, & Yung (2008) identified job satisfaction as one among the major factors influencing nursing professionalism. Çelik & Hisar (2012) reported a low but positive correlation between nurses' professionalism and job satisfaction. Aron (2015) reported a positive correlation between job satisfaction and quality of nursing care.

The findings of this study (**H8**) indicate that job satisfaction has a significant positive influence on professionalism among nurses (r = 0.413, P < 0.001). Job satisfaction is imperative for nurses as well as for the eminence of services they provide. Satisfied nurses are able to actively establish and meet the professional goals,

demonstrate greater professionalism, thus improving the quality of nursing care and promoting patient satisfaction. Nurses experiencing greater job satisfaction demonstrate higher levels of professionalism in their nursing care activities.

8.2.4 Objective 5. Interaction effects of Determinants on Professionalism

Social cognitive theory explains that the personal, environmental and the behavioural determinants interact dynamically resulting in behavioural outcome. In this study, nurses' perception about doctors' image of a nurse and nurse practice environment (**H9a2** and **H11a1;** NP-DINxNPE; $P < 0.002$) and nurses' perception about patients' image of a nurse and nurse practice environment (**H9b2** and **H11b1**; NP-PINxNPE; $P < 0.001$) had significant interaction effects. Similarly, interaction between emotional intelligence and nurses' perception about patients' image of a nurse (**H11b2**; EIxNP-PIN; $P < 0.037$) also had significant interaction effects on nurses' professionalism.

It is found that nurse practice environment strengthens the positive relationship between nurses' perception about doctors' image of a nurse and professionalism as well between nurses' perception about other hospital staffs' image of a nurse and Professionalism. This finding indicates that fostering positive perception of image of a nurse among doctors and patients in favourable nurse practice environment promote professionalism. Also, positive perception about patients' image of a nurse among those having higher emotional intelligence favours greater professionalism among nurses.

8.2.5 Objective 6. Mediation effects of Job Satisfaction

Mount, Ilies, & Johnson (2006) reported mediation effect of job satisfaction on the relationship between personality trait agreeableness and counter-productive behaviours; Guleryuz, Guney, Aydın, & Asan (2008) and Taboli (2013) between emotional intelligence and organisational commitment; Huffman, Casper, & Payne (2014) between spouse career support and employee turnover; Cingöz & Kaplan (2015) between psychological empowerment and innovative behaviour; Jain (2016) between vertical trust and distributed leadership; Mashi (2018) between

organizational justice and employee outcomes. Mansyur et al., (2017) identified mediation effects of job satisfaction on the relationship between work motivation and employees' performance and the relationship between leadership style and employees' performance, but reported that job satisfaction does not mediate the relationship between employees' competence and employees' performance.

In this study, testing for mediation in hypothesis **H12** showed that job satisfaction fully mediates the relationship between nurse practice environment and professionalism among nurses and partially mediates the relationship between emotional intelligence and professionalism among nurses. There is no mediation of job satisfaction on the relationship between nurses' perception about stakeholders' image of a nurse and professionalism.

Earlier findings of this study revealed significant influence of nurse practice environment and emotional intelligence on both; job satisfaction and professionalism and also the significant influence of job satisfaction on professionalism. Analysis used for testing the mediation effects explains that the nurse practice environment and emotional intelligence influence professionalism among nurses directly as well as indirectly through job satisfaction. Direct influence on professionalism is observed in earlier findings of this study, where the quality of nurse practice environment and the level of emotional intelligence are affirmative. Indirect effect arises when the nurse practice environment and emotional intelligence promote job satisfaction which further improves nurses' professionalism. This explains that nurses who are satisfied with the nurse practice environment and those who possess adequate levels of emotional intelligence that facilitates experiences of job satisfaction are consequently able to demonstrate higher levels of professionalism in their practice. It is also observed that "nurses perception about the stake-holders image of a nurse" influences professionalism neither directly nor indirectly through job satisfaction, except for "nurses' perception about doctors' and other hospital staffs' image of a nurse", which directly influence professionalism.

8.2.6   Objective 7. Moderation effects of demographic variables.

Earlier researchers have explored influence, association or relationship between the demographic variables, job satisfaction and professionalism. This research aimed to study the moderation effects of age, gender, marital status, religion, qualification, level of health care organisation, area of work, employment status, years of experience and sector of health care on the following:

i.   The overall model.
ii.   Relationship between nurses' perception about stakeholders' image of a nurse and professionalism.
iii.   Relationship between nurse practice environment and professionalism.
iv.   Relationship between emotional intelligence and professionalism.
v.   Relationship between nurses' perception about stakeholders' image of a nurse and job satisfaction.
vi.   Relationship between nurse practice environment and job satisfaction.
vii.   Relationship between emotional intelligence and job satisfaction.
viii.   Relationship between job satisfaction and professionalism.

Obj.7.a Moderation effects of age.

Kelly & Courts (2007) identified that age has a positive correlation with level of professional self-concept which is contradicted by Jahromi et al., (2014). Poh (2008); Hwang et al., (2009); Lu, Barriball, Zhang, & While (2012) and Basabr, Khankeh, Dalvandi, & Harouni (2018) found age as one among the predictors of job satisfaction. (Khamlub et al., 2013; Zheng et al., 2017) observed that older nurses report higher satisfaction with their job. Li (2012) reported association between EI and age. Age is also found to be significantly correlated with professionalism (Hwang et al., 2009; Solomon, Beker, & Belachew, 2015; Hassandoost, Moghadas, Momeni, & Rafiei, 2016). However, Landa, López-Zafra, del Carmen Aguilar-Luzón, & de Ugarte (2009) and Van Dusseldorp, Meijel, & Derksen (2011) found no correlation between age and emotional intelligence. Braganca & Nirmala (2018) identified no significant association between age and work meaningfulness or between age and perceived public image of a nurse.

However, the findings of this study reveal no moderation effects of **age** (**H9**) on any of the relationships. This could be because there are no differences in the job responsibilities, schedules, hours, area of work, facilities, type of patients, work patterns, etc. with respect to the nurses' age.

Obj.7.b Moderation effects of gender

Gender is identified as one among the predictors of job satisfaction (Lu, Barriball, Zhang, & While, 2012; Basabr, Khankeh, Dalvandi, & Harouni, 2018) and emotional intelligence; wherein female nurses scores are higher than male nurses (Van Dusseldorp, Meijel, & Derksen, 2011). It is identified as having association with professional self-concept (Jahromi et al., 2014), correlated with professionalism (Solomon, Beker, & Belachew, 2015), professional attitudes and behaviors acquired by dental students (Al-Sudani, Al-Abbas, Al-Bannawi, & Al-Ramadhan, 2013). The findings are contradicted by Li (2012) who reported that that gender is not correlated with emotional intelligence and Kim & Kim (2016) reported that there is no influence of gender on nurses' professionalism. Braganca & Nirmala (2018) identified no significant association between gender and work meaningfulness or between gender and perceived public image of a nurse.

In this study **Gender (H10)** had no moderation effects on any of the relationships. This finding could be explored in future research.

Obj.7.c Moderation effects of marital status

Ealias & George (2012) also identified that marital status influences job satisfaction and emotional intelligence. Jahan & Kiran (2013) also identified unmarried nurses reporting better job satisfaction as compared to married nurses. Solomon, Beker, Belachew (2015) revealed that single nurses demonstrate higher levels of professionalism as compared to married nurses. Basabr**,** Khankeh, Dalvandi, & Harouni **(**2018**)** reported marital status as a predictor of job satisfaction. Braganca & Nirmala (2018) found married nurses' perception of public view about them as having interpersonal power which is stronger than the perceptions of unmarried nurses, but did not report significant association with nurses' work meaningfulness. Contradicting the findings, researchers reported that marital status is neither correlated with level of professional self concept (Kelly & Courts, 2007), nor EI

(Landa, López-Zafra, del Carmen Aguilar-Luzón, & de Ugarte, 2009) nor with nursing professionalism (Yeun & Jeon, 2015).

The demographic variable, **marital status** (**H11)** has no significant moderating effect on the overall model, however, there is statistically significant moderating effect on the relationship between nurse practice environment and job satisfaction. This relationship is found to be stronger for single or unmarried nurses as compared to the married nurses. Married nurses might have other factors that influence their experience of job satisfaction such as family commitments, caring for children, work, family life balance, etc. Majority of the nurses have the obligatory role of managing the home as well as patient care at work place. Unmarried nurses do not face all these issues. Hence the nurse practice environment has a greater influence on the job satisfaction of unmarried nurses.

Obj.7.d Moderation effects of religion

Cohen & Kol (2004) reported significant correlation between professionalism and OCB as well as stronger mediation effects of justice at the workplace between professionalism and OCB among Jewish but not in case of non Jewish nurses. Braganca & Nirmala (2018) identified no significant association between religion and work meaningfulness or between religion and perceived public image of a nurse.

The demographic variable **religion** (**H12)** has statistically significant moderating effect on the overall model as well as on the relationship between the nurse practice environment and professionalism. The relationship is found to be stronger for Muslim nurses as compared to Hindu and Catholic nurses.

It is a generally accepted belief (one of the principles of Christianity is considered to be altruistic service) that Christianity and service are strongly related, and this belief is further witnessed in the large number of Christian nurses in the profession across the country, as well as among the Indian nurses who have migrated to other countries. Hence, nurse practice environment might not be a real concern for the Christian nurses in rendering their service with professionalism. However, the influence of religion on the relationship for other two religions can be further explored.

The relationship between "nurses' perception about the stakeholders image of a nurse" and professionalism is also statistically moderated by religion, except for model d, "nurses perceived mage of a nurse". In "nurses' perception about doctors' image of a nurse", the relationship is found to be stronger for the Catholic nurses as compared to Hindus and Muslim nurses. In "nurses' perception about patients' image of a nurse" the relationship is stronger for the Muslim nurses as compared to Catholic and Hindus nurses. Whereas, in "nurses' perception about other hospital staffs' image of a nurse" the relationship is stronger for the Hindu nurses as compared to Catholic and Muslim nurses.

Obj.7.e Moderation effects of qualification.

Porter & Porter (1991) reported that nurse's image differed among graduate and post-graduate qualified nurses. Brooks & Shepherd (1992) noted no significant difference among seniors from four year generic program and associate degree seniors, but noted a difference among diploma program seniors on measure of professionalism. Wynd (2003); Kim-Godwin, Baek, & Wynd (2010); Al-Sudani, Al-Abbas, Al-Bannawi, & Al-Ramadhan (2013); Konukbay et al., (2014); Tanaka, Yonemitsu, & Kawamoto (2014); Solomomn, Beker, & Belachew (2015) and Dikmen, Karataş, Arslan, & Bedriye (2016) reported professionalism as significantly related to higher educational degrees in nursing. Shah & Jalees (2004) noted that nurses with diploma qualification are more satisfied as compared to those having baccalaureate degree. Kelly & Courts (2007) identified that educational level does not have correlation with level of professional self-concept. Toren, Kerzman & Kagan (2011) also identified significant differences in nurses' perception of their professional image between nurses with post-basic education and those with generic education. Educational level is identified as one among the variables influencing job satisfaction (Lu, Barriball, Zhang, & While, 2012; Basabr, Khankeh, Dalvandi, & Harouni, 2018) and is associated with emotional intelligence (Li, 2012). Braganca & Nirmala (2018) identified that the nurses' perception in the sub area of perceived public image, i.e. interpersonal relations of diploma qualified nurses as more positive than the perception of degree qualified nurses, but did not find significant association with nurses' work meaningfulness.

Although **Qualification** (**H13)** does not have statistically significant moderating effect on the overall models, it does significantly moderate the paths between the nurse practice environment and professionalism (NPE,Prof). The relationship is stronger for nurses with General nursing and midwifery qualification, than for nurses with B. Sc. and M. Sc. qualified nurses.

This relationship might be more significant for the GNM nurses because most of their knowledge and skill update happens through their interaction with the supervisors and colleagues in their practice environment. Also the adequacy of resources and staff, clarity of job description, etc. in their practice environment will benefit these nurses to exhibit professionalism in their day to day activities while dealing with the rising burden of newer disease patterns, newer treatment modalities and the technological advances.

The relationship between " nurses' perception about doctors' image of a nurse" and professionalism (NP-DIN,Prof) is found to be stronger for the B.Sc. as compared to nurses with General nursing and midwifery and M. Sc. Nursing qualified nurses.

It is observed that many of the new entrants into the four year duration, B. Sc. Nursing program join this profession not by choice, rather as an alternative because they were unable to secure admission into medicine. They also perceive nursing as a profession that is at a level next to medicine, wherein they can gain adequate scientific knowledge and skill that is little less in-depth as compared to medical professionals which will help them in their personal and professional life. Hence their "perception about doctors' image of a nurse' holds much more influence on their professionalism as compared to the other two groups.

The relationship between emotional intelligence and job satisfaction, (EI,J sat) is stronger among the M.Sc. qualified nurses as compared to the B. Sc. and the General Nurses and Midwives. The path J_Sat,Prof is also moderated by qualification with M. Sc. qualified nurses having stronger relation as compared to B. Sc. and GNM nurses.

Currently, there is neither clear job description nor difference in the professional roles and responsibilities based on qualification. The additional or higher

qualification is not considered noteworthy and these nurses have to function like any other GNM or B. Sc. Nursing qualified nurses and without any additional monetary benefit. At times they might even experience negative feelings of having wasted time and money in acquiring the higher qualification. They might experience frustration for being unable to use their knowledge and potential in the routine practice. They might be expected to know and exhibit greater potential than other less qualified nurses within the given nurse practice environment. To deal with all these additional stressors these nurses with higher qualification will need to exploit their emotional intelligence in appraising, understanding and regulating self and others' emotions in order to experience job satisfaction. Sequentially, those experiencing satisfaction will demonstrate greater level of professionalism in their practice.

Obj.7.f Moderation effects of level of health care organisation.

The variable level of health care organisation (**H13)** does not moderate the relationships at model and nor at path level. All nurses, irrespective of their workplace, are equally qualified and equipped with the knowledge and skills to meet the health care needs of patients. Every health care organisation also, is designed and equipped with, to meet the health care demands at a specific level. This could help them to get tuned at performing at the desired level of professionalism at their respective level of health care organisation, irrespective of the other influencing factors.

Obj.7.g Moderation effects of area of work.

Mrayyan (2006) found that ward nurses report better job satisfaction than those in critical care units. Halter (2008) described that students conceptualize Psychiatric nurses as less professional, performing menial-physical tasks, lacking autonomy, being exploited and as inferior to general nurses. Work setting/unit type influences the level of job satisfaction among registered nurses (Poh 2008; Hwang et al., 2009) and is associated with the level of professionalism (Kim-Godwin, Baek, & Wynd, 2010). Roche, Duffield, & White (2011) reported that mental health nurses had staff adequacy and superior nurse-doctor relationships whereas general ward nurses had stronger leadership, greater participation in hospital affairs, and enhanced foundations of nursing care quality. Emeghebo (2012) observed that hospital nurses have negative perceptions as compared to those working in maternal–child health

area. Alsaraireh, Quinn Griffin, Ziehm, & Fitzpatrick (2014) identified psychiatric nursing as a stressful occupation affecting job satisfaction. Solomon, Beker, & Belachew (2015) reported that working unit/area is not associated with level of professionalism among nurses. Al-Hamdan, Manojlovich, & Tanima (2017) revealed that nurses employed in public hospitals as more satisfied than nurses working in teaching hospitals and observed highest job satisfaction among nurses working in the surgical area followed by those working in infection control, continuous education department, quality management and pediatric units compared to critical care units. Contradictory, those working in inpatient unit/wards experience work load which is negatively associated with job satisfaction (Semachew, Belachew, Tesfaye, & Adinew, 2017). Mousa (2017) identified more incidences of falls and medication errors among patients in medicine wards as compared to surgical followed by critical care unit patients. Zheng et al., (2017) reported that Psychiatric nurses are generally satisfied with their job. Braganca & Nirmala (2018) noted that nurses working in the community area experience higher levels of work meaningfulness than those in the area of maternal and child health.

Area of work (**H14)** is found to display statistically significant moderation effects at the overall model level in all the four models. This variable is also found to moderate the relationship between perception of image and professionalism among nurses. The relationship between "nurses' perception about doctors' image of a nurse and professionalism (NP-DIN,Prof) is stronger for nurses working in Paediatrics as compared to those in Surgery, Emergency/OT/ICU, Medicine, Psychiatry and Community and least for those working in Obstetrics and Gynaecology, whereas in the path between "nurses' perceived image of a nurse and professionalism (NP-IN,Prof), the relationship is stronger for nurses working in Obstetrics and Gynaecology as compared to those in Surgery, Community, Medicine, Paediatrics, Psychiatry and least for those working in Emergency/OT/Intensive care units.

Pediatric department includes Pediatric medicine, Pediatric surgery, Neonatal unit and the Pediatric and Neonatal intensive care unit. Positive "perception about doctors' image of a nurse" is vital for nurses working in these areas, because these work areas demand higher levels of self-confidence and trusting interpersonal team relationships, combined with adequate knowledge and skills. They need to posses the

ability to understand and manage the critical and emergency situations, which include managing sick children and sick newborns that are vulnerable and need intensive nursing care and added attention. Due acknowledgement, mutual coordination and support from the doctors who remain with the patients for longer duration and are involved in the overall management of the patients is necessary to boost the confidence of these nurses. Also surgery and Emergency/ICU/OT supports this need for greater confidence among nurses in making critical and life saving decisions and handling emergencies and totally dependent patients. Therefore having positive perceptions about doctors' image of a nurse among the nurses working in these areas is essential to enhance their professionalism

Whereas, pregnancy, labor, birth of a child are normal physiological processes unless if there are complications. Majority of the nurses are females and many are married, having the experience similar to the "mother-child dyad" in the obstetrical and gynecology area. Many mothers prefer to discuss most of their problems with the nurses as most of the doctors are men or inexperienced young females. Hence their "perceived image of a nurse" becomes more significant as compared to the "perception about doctors' image of a nurse" in demonstrating their professionalism.

The path between emotional intelligence and professionalism is moderated by area of work, wherein the relationship is stronger for nurses working in the Psychiatric area than those in Obstetrics and Gynaecology, Community, Paediatrics, Surgery, Emergency/OT/ICU and is least for Medicine ward nurses.

Emotional intelligence includes appraisal, understanding, regulation of self and others' emotions and the thriving use of these emotions. Nurses in the psychiatric area have to handle individuals with distorted cognition, thought, judgement and insight. Irrespective of the illness, the phase and related manifestations, nurses face the challenge of caring for individuals whose emotions are labile and difficult to appreciate and regulate. Hence nurses possessing higher levels of emotional intelligence will have the ability to demonstrate greater professionalism behaviours while caring for individuals in psychiatric area. In the medicine department the patients are either chronic patients who are totally dependent for meeting their physical needs and require long term care or new, acute cases. Some of these patients are even admitted as an emergency. Nurses get well acquainted in managing the old,

chronic cases because of the length of the stay of the patient in the unit. The handling of new, acute and or emergency patients is often similar to the Emergency/OT/ICU area, wherein the immediate focus in on saving the life of the patient, rather than on appraising, understanding or regulating emotions. Hence, comparatively emotional intelligence influences the professionalism of nurses working in these areas to a lesser extent.

The relationship between nurse practice environment and job satisfaction is also moderated by area of work in all the models and is stronger for nurses in the Emergency/OT/ICU, Medicine, Surgery, Paediatrics, Obstetrics and Gynaecology, Psychiatry and least for those working in Community.

This finding highlights the importance of resource availability, staff adequacy, knowledge update on technological advances through in-service and or continuing education program, good interpersonal team relations, clear job descriptions that create an adequate nurse practice environment, while handling emergencies and critical situations which are necessary for nurses to experience satisfaction in their job. Nurses working in these areas are expected to know the working of, and use high technology equipments in the day to day nursing care practice. Also the types of patients these nurses handle are sometimes struggling between life and death. Non availability of resources, staff shortage, lack of knowledge and skill update, etc., can hamper the nursing function and even cost patient's life. These factors can compound the stress in these work areas thereby causing dissatisfaction among these professionals. Hence quality of the nurse practice environment greatly influences job satisfaction among nurses working in the Emergency/OT/ICU area.

Primary level health care services are provided at the health centre or community level which does not mandate the requirement of high technology equipment. The services provided in the community are mostly preventive and promotive and to some extent curative and/or rehabilitative. Some of the patients are cared for in their own homes. Most of the patients need supportive educative nursing care, rather than totally dependent care that is required in the emergency/OT/ICU setting. Nurses working in the community settings usually work in collaboration with and within the patients' families and communities which favours development of healthy rapport with the patients, their families. They sometimes serve as a link

between the patient, family and other government departments, such as panchayat, schools, etc. which adds to the satisfaction of the nurses working in the community area.

The path between emotional intelligence and job satisfaction is also significantly moderated by the area of work with the nurses from Obstetrics and Gynaecology having stronger relationship as compared to Psychiatry, Medicine, Community, Emergency/OT/ICU, Surgery and Paediatric nurses.

Nurses working in the area of Obstetrics and Gynaecology encounter pregnant women, women in labor and/or mothers with new born babies. Many a times the women are left alone to manage by themselves, the hospital policy does not permit attendants to accompany the mother in the delivery room in the government settings, and the nurses have to take the role of the women's family person. Many times these women are first time mothers, who are not prepared enough or are not equipped with the skill and knowledge to manage themselves and their new born babies. The attending female nurses have to empathize with the stressed mothers. The unmarried, inexperienced ones might not know how to handle the situation. Psychiatry is another stressful area wherein the entire onus is on the nurses to understand and manage these patients with altered mental status. Hence, nurses working in these areas will need higher emotional intelligence to manage their own as well as the emotional burden of the nursing care recipients and yet, experience job satisfaction.

Obj.7.h   Moderation effects of employment status

Nurse's image differs among full-time and part-time nurses (Porter & Porter 1991). Permanent nurses report higher levels of job satisfaction than temporary nurses (Han, Moon, & Yun, 2009). Employment status is associated with level of professionalism (Kim-Godwin et al 2010). Braganca & Nirmala (2018) identified no significant association between employment status and work meaningfulness or between employment status and perceived public image of a nurse.

Employment Status (**H16)** of nurses does not moderate the relationships at model level, but has statistically significant moderation effects on the path between nurse practice environment and job satisfaction (NPE,J Sat) with temporarily employed nurses having a stronger relationship as compared to the permanently employed.

This finding can be discussed on the basis that the temporarily employed nurses are the new, young entrants into the nursing profession. Similar to the finding related to the marital status, these young nurses' focus could be on the adequacy of the nurse practice environment that includes resource availability, staffing, educational opportunities, facilities, job descriptions, etc. On the other hand the permanent nurses are mostly the older ones who are adapted to the system since long, are able to improvise in situations of inadequate resources and may have other factors influencing their job satisfaction. Most of the private sector nurses and some in the government sector are temporarily employed. Favourable levels of nurse practice environment might obscure the dissatisfying influences of job insecurity and lower pay structures and serve as compensation, thus resulting in greater influence on the job satisfaction of temporarily employed younger nurses as compared to the older permanently employed professionals.

Obj.7.i Moderation effects of years of experience

Porter & Porter (1991) reported that nurse's image differs among beginners and experts, Emeghebo (2012) revealed that junior nurses regard senior nurses negatively and vice versa. Years of service is among the predictors of (Lu, Barriball, Zhang, & While, 2012) and is associated with job satisfaction (Poh, 2008; Khamlub et al., 2013; & Zheng et al., 2017). Ealias & George (2012) identified the influence of experience on job satisfaction and emotional intelligence but is contradicted by Landa, López-Zafra, del Carmen Aguilar-Luzón, & de Ugarte, (2009) and Van Dusseldorp, Van Meijel, & Derksen (2011). Wynd (2003); Kim-Godwin, Baek, & Wynd (2010); Tanaka, Yonemitsu, & Kawamoto (2014); Fantahun et al., (2014) Solomon, Beker, & Belachew (2015); Dikmen, Karataş, Arslan, & Bedriye (2106) and Hassandoost, Moghadas, Momeni, & Rafiei (2016) found relation between professionalism and years of experience which is contradicted by Yeun & Jeon (2015). Braganca & Nirmala (2018) identified no significant association between experience and work meaningfulness or between experience and perceived public image of a nurse.

Years of experience (H17) does not significantly moderate at overall model level, however, it significantly does moderate the path between nurse practice environment

and job satisfaction (NPE,J_Sat) wherein this relationship for novice nurses is stronger than for the competent and expert nurses.

This finding also in par with the finding related to the marital and the employment status. The younger, unmarried, temporarily employed novice nurses experience of better nurse practice environment has greater influence on their job satisfaction as compared to the job satisfaction among married, older, permanently employed competent and expert nurses who will have other factors determining their job satisfaction and are already adapted to function in given the nurse practice environment.

Obj.7.j Moderation effects of Sector of organisation

Celik & Hisar, (2012) identified that the professionalism among nurses working in private hospital was higher than those working in university and public hospitals. The job satisfaction of private and university hospital nurses was higher than the nurses employed in public hospitals. Sejjaaka and Kaawaase (2014) noted significant lower job satisfaction amongst Certified Public Accountants (CPA) employed in the public sector but no significant difference in professionalism between the CPAs employed in the private and public sector. Jahan & Kiran (2013) and Al-Hamdan, Manojlovich, & Tanima (2017) found that nurses working in government sector communicated better job satisfaction in comparison to nurses in the private sector who experienced greater job insecurity and long working hours.

Sector of organisation (**H18)** is found to moderate at the model level as well as certain path level. The moderation on the relationship between the perception of image and professionalism is statistically significant wherein the relationship is stronger for nurses working in autonomous sector as compared to the private and government sector. The path nurse practice environment and job satisfaction (NPE,J Sat) is moderated and the relationship is stronger for the nurses working in the autonomous sector, as compared to those in the government and private sector.

These findings highlight the significant differences in various paths between the autonomous sector and the government and private sector. The employees of the three different sectors function in isolation and there is hardly any interaction with each other. The day to day interaction is limited to the personnel within the hospital

who are also the stakeholders. Majority of the nurses are diploma qualified nurses. Hence, their perception of stakeholders' image of a nurse will influence the professionalism among the nurses employed in the autonomous sector as compared to the nurses in the other two sectors.

With respect to the relationship between the nurse practice environment and job satisfaction, being an autonomous sector the nurse practice environment will be different from the other two sectors in terms of limited internal rotation, experience in handling variety of cases, exposure to variety of health care professionals, turnover of patients and the type of nursing services as compared to those of the government and major private sector nurses. There could also be feeling of stagnation among these professionals. Hence would need higher levels of nurse practice environments to enhance their experience of job satisfaction. However, these findings can be further explored in future studies.

This chapter discussed the findings of the current study in the light of the findings of previous researchers in the area of the determinants of professionalism, the mediating effects of job and the moderation effects of the demographics variables on the overall models as well as on the relationship between the independent and dependent constructs.

CHAPTER 9

THEORETICAL CONTRIBUTIONS, IMPLICATIONS AND CONCLUSION

This chapter presents the significant theoretical contributions from this research in the area of professionalism among nurses. It further details the managerial implications, the limitations of this study and makes suggestions for further research.

9.1   THEORETICAL CONTRIBUTIONS

This study adds to the literature by considering the theoretical background and support of social cognitive theory to identify the influence of social and personal determinants on professionalism in the context of nursing. This theory is used by earlier researchers in psychology, education and communication, more as "social learning theory" rather than as "social cognitive theory".

1. Social cognitive theory argues that human functioning is richly contextualized, socially interdependent and conditionally orchestrated in the dynamics of a variety of societal subsystems and a complex interplay of various factors. It explains human performance in terms of reciprocal causation in which internal personal factors, the behavioral patterns and the environmental controls together operate as interacting determinants towards producing behavioral outcomes as shown in Fig. 9.1.
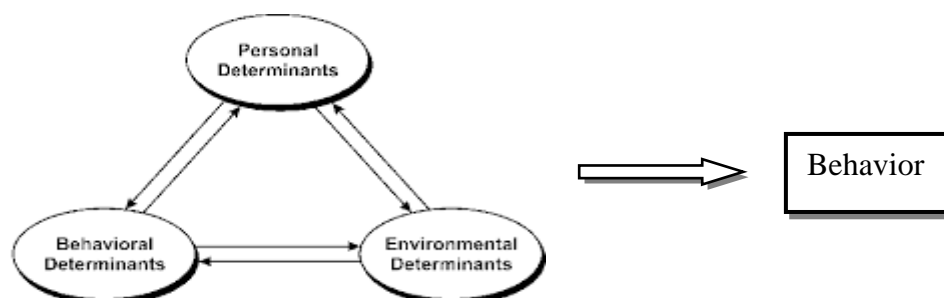
Fig. 9. 1 : The triadic reciprocal causation of behaviour as explained in Social Cognitive Theory (Bandura, 1999; 2001)

In this study nurses' perception about stakeholders' image of a nurse is considered as the social environmental determinant, nurse practice environment as the physical environmental determinant, emotional intelligence as the personal determinant, professionalism among nurses as the behavioural outcome, job satisfaction as the mediator and the demographic variables as moderators. This research proposed to explore the direct influence of the determinants as well as the interaction effects on the behavioural outcome; professionalism. It further extends the social cognitive theory by exploring the mediation effects of job satisfaction on the relationship between the determinants and behaviour and testing the moderation effects on different relationships as seen in Fig. 9.2.
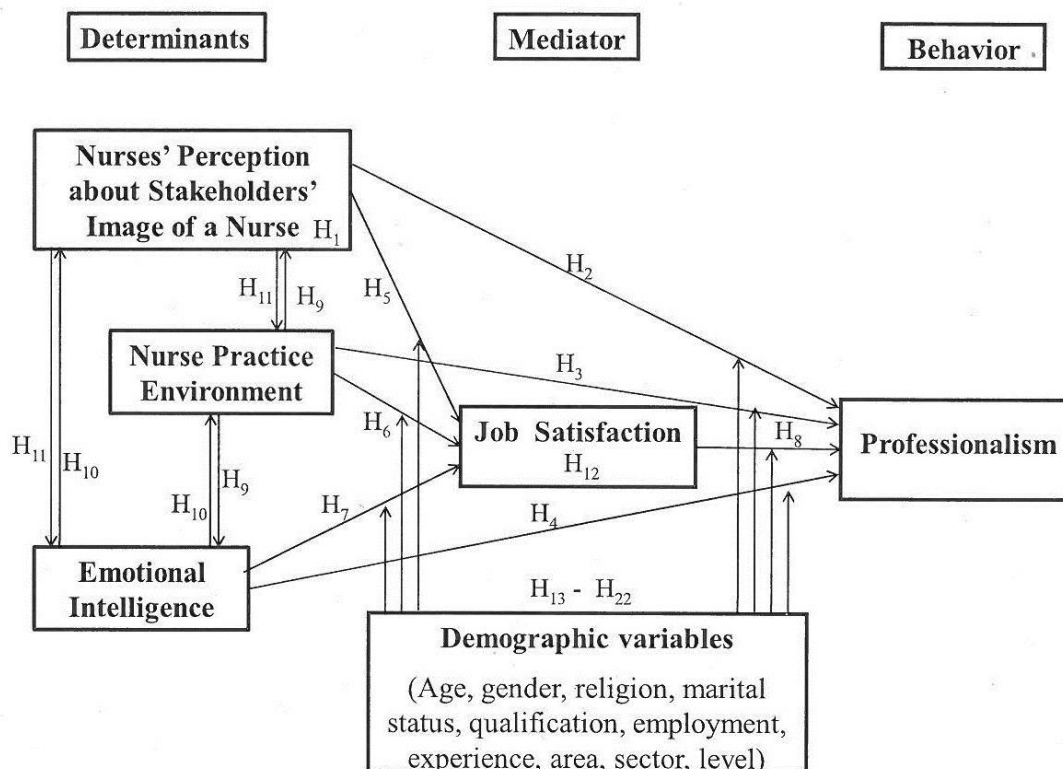
Fig. 9.2 Proposed Conceptual Model in the Study

This research confirms the direct influence of the personal and environmental determinants on the behaviour as well as the interaction effects of the determinants on professionalism among nurses. It is found that emotional intelligence, nurse practice environment and nurses' perception about stakeholders' (doctors and other hospital staffs) image of a nurse has significant direct influence on professionalism among nurses. Nurse practice environment and emotional intelligence is also found to

influence job satisfaction among nurses. It is found that there is a significant interaction effect of nurses' perception about doctors' and patients image of a nurse and nurse practice environment as well as emotional intelligence on their behaviour outcome. Testing for mediation effects supported that the influence of the personal and environmental determinants on professionalism is enhanced if directed through a mediator; job satisfaction. The research further supported the moderation effects of marital status, religion, and qualification, area of work, employment status, experience and sector of health care organisation on the different relationships in this study as shown in Fig. 9.3.
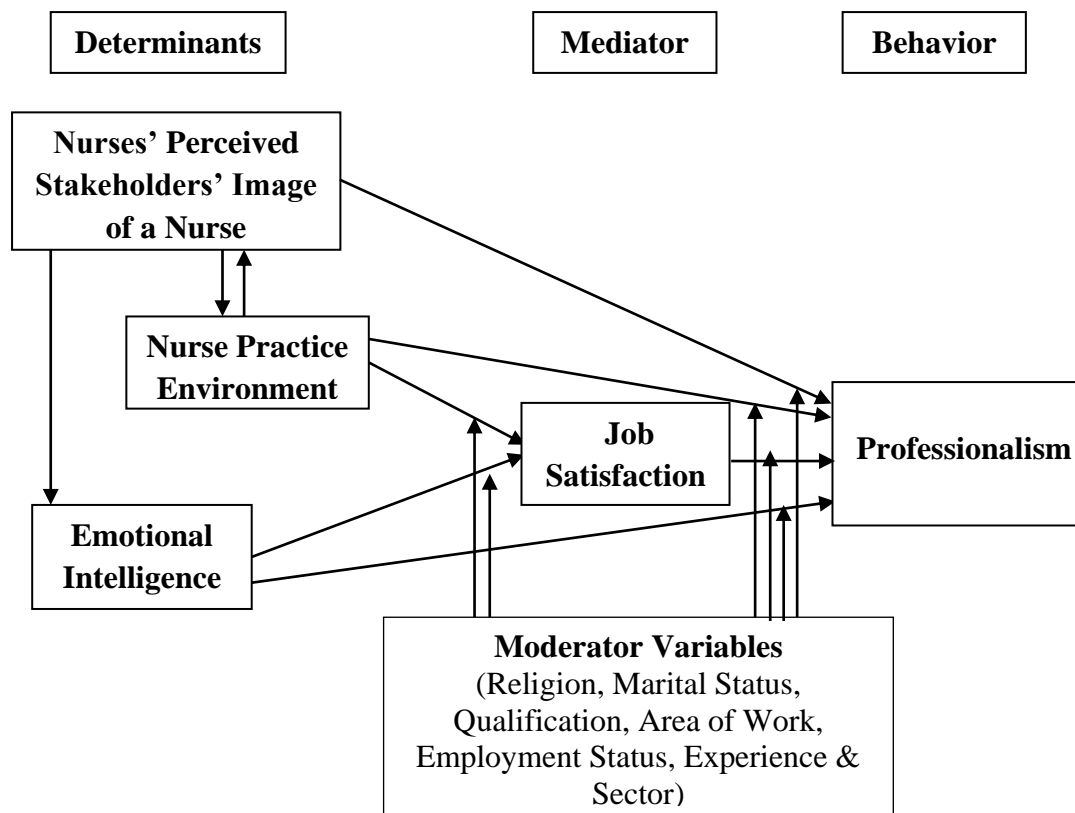
Fig. 9.3 : Tested and supported relationships in the model of this study

2. Most of the earlier researchers have explored the level of professionalism among nurses and a few have evaluated the influence of some or individual factors such as self image (Solomon, Beker, & Belachew, 2015), and organisational culture (Manojlovich & Ketefian 2002; Solomon, Beker, & Belachew, 2015), structural empowerment (Manojlovich, 2005), job satisfaction (Han, Kim, & Yung, 2008), demographic variables, etc. on professionalism among nurses. Researchers have communicated gaps indicating the need to explore the influence of personal and or

environmental factors influencing this behavioural construct. This study closes the gaps in a single study and reveals that the personal determinant; emotional intelligence, the physical environmental determinant; nurse practice environment and the social environmental determinant; nurses' perception about doctors' and other hospital staffs' image of a nurse' significantly influence professionalism among nurses directly as well as through interaction among the determinants. Hence these areas should be given due focus. "Nurses' perception about patients' image of a nurse and nurses' perceived image of a nurse had no significant influence on the professionalism among nurses; these factors may be further explored.

3. Earlier researchers have reported that factors such as image (Takase, Kershaw, & Burt, 2002; Takase, Maude, & Manias, 2006), workload (Li & Lambert, 2008), working conditions (Abbaschian, Avazeh, & SiahkaliS, 2010), workload, working unit, and mutual understanding at work (Semachew, Belachew, Tesfaye, & Adinew, 2107), and the demographic factors influence job satisfaction among nurses. This single study explored the influence of personal factor; emotional intelligence, the physical environment; nurse practice environment and the social environment; nurses' perception about stakeholders' image of a nurse' on job satisfaction among nurses. The findings identified that nurse practice environment and emotional intelligence significantly influences nurses' job satisfaction, but nurses' perception about stakeholders' image of a nurse' does not.

4. "Nurse Professionalism Scale, (NPS)" was developed using the "Code of Professional Conduct for Nurses, Indian Nursing Council". This scale was discussed with and rated by experts, validated and tested for the psychometric properties. The scale was found to be internally consistent and reliable. The convergent and discriminant validity indicated acceptable levels of construct validity of the scale. Previous researchers used the scales such as "Behavioral Inventory Form for Professionalism in Nursing" (BIPN) developed by Miller, Adams & Beck (1993) based on "The Social Policy Statement (1980), Code for Nurses with Interpretative Statements (1976), and recommendations and policies from the American Nurses Association (ANA)" and the Registered Nurses Association, Ontario Best Practice Guidelines (RNAO-BPG, 2007) to evaluate the level of professionalism among nurses. "Nurse Professionalism Scale, (NPS)" is

based on the national code of professional conduct, and is more comprehensive and in the light of requirements set by the Indian Nursing Council. This scale can be used or adapted in future nursing research in different settings across the country as well as other countries with similar background.

5. This study adapted tools to measure the social environmental ("Nurses' Perception about Public Image of a Nurse"); physical environmental ("Nurse Practice Environment"); personal determinants (Emotional Intelligence), and the mediator (Job satisfaction). These adapted tools are also tested for the psychometric properties. All the scales are found to be consistent, reliable and valid.

6. The construct "Nurses' Perceived Public Image of a Nurse" is captured with reference to multiple stakeholders in a single study. The scale measuring "nurses' perception about each stakeholder's image of the nurse" is tested individually. The data collected on the constructs with reference to individual stakeholder is analysed and the findings are interpreted and discussed discretely.

7. Varied demographic variables had been identified by different researchers as being related, associated or influencing the constructs in isolation and some of the variables together. This study has identified that religion, marital status, qualification, area of work, employment status, experience and sector of health care moderates different relationships. The relationship between perception of image and professionalism among nurses is found to be stronger for nurses working in Paediatrics as compared to those in Surgery, Emergency/OT/ICU, Medicine, Psychiatry and Community and least for those working in Obstetrics and Gynaecology, whereas in the relationship between "nurses perceived image of a nurse' and professionalism (NP-IN,Prof) is stronger for nurses working in Obstetrics and Gynaecology as compared to those in Surgery, Community, Medicine, Paediatrics, Psychiatry and least for those working in Emergency/OT/Intensive care units. The path between emotional intelligence and professionalism is stronger for nurses working in the Psychiatric area than those in Obstetrics and Gynaecology, Community, Paediatrics, Surgery, Emergency/OT/ICU and is least for Medicine ward nurses. The relationship between nurse practice environment and job satisfaction is stronger for nurses in the Emergency/OT/ICU, Medicine, Surgery, Paediatrics, Obstetrics and Gynaecology, Psychiatry and least for those working in Community. The path between emotional intelligence and job satisfaction is stronger for nurses from

Obstetrics and Gynaecology as compared to Psychiatry, Medicine, Community, Emergency/OT/ICU, Surgery and Paediatric nurses. These findings provide great insight for the HR policy makers, hospital administrators and nurse managers in the health care industry.

9.2   MANAGERIAL IMPLICATIONS

Several practical implications which can be of interest to the nurse educators, nurse clinicians, nurse managers as well as hospital administrators can be drawn from the findings of this study.

1. This study identified that nurse practice environment greatly influences job satisfaction as well as professionalism among nurses. Nurses administrators along with policy makers have to devise strategies that focus on redesigning the structure of work environment and improving work conditions thereby enhancing job satisfaction and professionalism among nurses.

    a. Health care administrators, policy makers and those involved in health resource planning should provide policy support to nursing education and professional practice that can help in the creation and maintenance of healthy nurse practice environments, for nurses from student phase to their mission through qualified professional practice.

    b. Human resource managers should offer adequate support and reinforcement to ensure nurses' commitment to incessant learning. They should ensure facilities and opportunities for continuous professional development with a focus on matters related to professional conduct, knowledge and skill.

    c. Nurse managers should structure the nurse practice environment through vision sharing, managerial support and leadership and plan policies for regular in-service education for nurses on facilitating empowerment of nurses with an aim to improve job satisfaction and professionalism among nurses.

    d. Special attention should be given to improve the nurse managers' abilities, leadership qualities and support for nurses.

    e. There is a need for regular monitoring the adequacy of staff and resources, team relations and need for staff development activities.

2. This study emphasized that emotional intelligence greatly influences professionalism as well as job satisfaction among nurses.

   a. These findings highlight the need for nurse educators to incorporate strategies towards reinforcement of emotional intelligence among the nursing students. Hospital administrators and nurse managers to do likewise for the hospital nurses through in-service grooming programs towards greater professionalism so that the prospective as well as already in service care providers will be better able to provide quality service and promote greater patients' satisfaction.

   b. This study provides suggestions for the management towards implementing policies which will support promotion of emotional health of these essential health care professionals.

3. Significant influence of nurses' perception about doctors' and other hospital staffs' image was identified on professionalism among nurses.

   a. This finding indicates the requirement of administrative and managerial support towards promoting greater and healthier interpersonal team relations between the nurses, doctors and other hospital staff who directly or indirectly are involved in the patient care services. This finding can also have implications for the nurse educator in providing for and facilitating adequate knowledge and skill acquisition during the four year degree program through adequate and appropriate clinical exposure, simulations, OSCE, etc. Hospital nurses should also be encouraged to undergo periodic knowledge and skill update programs through in service or continuing education. This will add to the confidence and morale of the young as well as among the in-service professionals.

4. There was a significant influence of job satisfaction on professionalism among nurses. Also the influence of nurse practice environment and emotional intelligence on professionalism is mediated through job satisfaction which implies that nurses' behavior can be improved by promoting greater independence in their jobs, job security and an attitude of social service.

5. To test the moderation effects of marital status, the hospital nurses were divided into two groups. The relationship between nurse patient environment and job satisfaction was found to be stronger for the unmarried nurses as compared to the married nurses. This calls for attention of the administration for providing

adequate nurse practice environment for the young, new recruits. This can also be a strategy to prevent attrition, especially in the private sector.

6. It is observed that the nurse practice environment significantly influences professionalism among Muslim nurses as compared to the Catholic and Hindus nurses. Hence, managers and administrators have the responsibility of confirming safe, friendly and healthy nurse practice environment in order to facilitate professionalism among the nurses from all religions.

7. Nurses' perception about stakeholders' image of a nurse had significant influence on professionalism among nurses but differed within the three religious groups. This finding stresses on the provision of adequate material support, nurse patient-staffing and knowledge skill update that will boost the self-confidence among the nurses and promote trusting interpersonal relations. Strategies such as performance appraisal by self, supervisors and others and positive reinforcement in the form of rewards for best performance can also be implemented. This will lead to facilitation of competent and efficient nursing care services that will further improve the status of nurses.

8. Emotional intelligence was found to have a stronger influence on professionalism among Hindu nurses as compared to Christian and Muslim nurses. Special attention should be given to this group of nurses in boosting their emotional health and intelligence through seminars, workshops, counselling, etc. Also managers can assign appropriate and adequate mix of nurses of different religions in the areas that will support, complement and facilitate the improvement of this significant personal trait among nurses.

9. Three groups were tested for the moderating effects of qualification which revealed that the influence of nurse patient environment on professionalism was stronger for nurses with General nursing and midwifery qualification, than for nurses with B. Sc. and M. Sc. qualified nurses. This supports the need for in-service, continuing education and knowledge and skill update programs and simultaneous guidance from supervisors and nurse managers for the hospital nurses and especially for those having GNM qualification. There should be clear policies and protocols for managing specific conditions which can be used as guidelines in the routine patient care activities by all nurses.

10. It is observed that the relationship between " nurses' perception about doctors' image of a nurse" and professionalism is stronger for the B.Sc. as compared to

nurses with General nursing and midwifery and M. Sc. Nursing qualified nurses. Nursing educators should develop strategies to foster professionalization among the new young entrants through the B.S. Nursing four year program which will aid in improving the self-esteem among the young professionals. The hospital administrators and nurse managers should promote healthy doctor-nurse team relations and favour professionalism among the hospital nurses through performance appraisal and positive reinforcement.

11. The relationship between emotional intelligence and job satisfaction is stronger among the M.Sc. qualified nurses as compared to the B. Sc. and the GNM nurses. The relationship between job satisfaction and professionalism is also moderated by qualification with M. Sc. qualified nurses having stronger relation as compared to B. Sc. and GNM nurses. These findings have managerial implications which highlight the need for strategies for promoting job satisfaction among nurses possessing higher qualification. There should be clear job descriptions based on the efficiency and/or educational level of nurses. They can be considered for handling higher nursing functions. Nurse managers and hospital administrators should encourage hospital nurses to acquire higher qualification, as this two year duration Master of Science in Nursing program is provided by the Nursing Institute which is also under the state government. Acquisition of higher qualification for the in-service nurses will aid in the improvement of social status of the profession as well as the professionals which will directly and or indirectly build up job satisfaction and professionalism among these professionals.

12. Moderating effect of the variable, area of work was tested using six individual groups, which resulted in the finding that the relationship between "nurses' perception about doctors' image of a nurse and professionalism is stronger for nurses working in Paediatric as compared to those in Surgery, Emergency/OT/ICU, Medicine, Psychiatry and Community and least for those working in Obstetrics and Gynaecology, whereas the relationship between "nurses' perceived image of a nurse" and professionalism is stronger for nurses working in Obstetrics and Gynaecology as compared to those in Surgery, Community, Medicine, Paediatrics, Psychiatry and least for those working in Emergency/OT/Intensive care units. These findings imply the need for stronger

and trusting team relations among the nurses and doctors in the Pediatric, Surgery, Emergency/OT/ICU followed by others. Managers should provide greater focus on the needs of these nurses working in these critical care areas. A strong difference is observed among the nurses working in the Obstetrics and Gynaecology area wherein the relationship between "nurses' perceived image of a nurse and professionalism is strongest. Hence there is a need to foster positive image of a nurse among the nurses themselves which can be supported through provision of in-service training programs wherein these nurses can acquire additional skills that involve counselling of and support services for mothers and families. The female nurses working in this unit usually have mostly experiences of child bearing and rearing of children and family. Hence these nurses can be encouraged to support decision making for and guiding the mother-newborn and family. This can heighten their perceived image of a nurse.

13. The study found that the relation between emotional intelligence and professionalism is stronger for nurses working in the Psychiatric area as compared to those working in Obstetrics and Gynaecology, Community, Paediatrics, Surgery, Emergency/OT/ICU and is least for Medicine ward nurses. It is also found that the relationship between emotional intelligence and job satisfaction is stronger for nurses working in Obstetrics and Gynaecology as compared to Psychiatry, Medicine, Community, Emergency/OT/ICU, Surgery and Paediatric nurses. These findings helps the managers and administrators to plan and organise programs that will assist stress management and foster the emotional health and emotional intelligence of nurses working in the area of intense need for this personal attribute.

14. The relationship between nurse practice environment and job satisfaction is moderated by area of work and is stronger for nurses in the Emergency/OT/ICU, Medicine, Surgery, Paediatrics, Obstetrics and Gynaecology, Psychiatry and least for those working in Community. This finding indicates the need for strong nurse managers' ability, support and leadership, and foundations for quality nursing care in these work areas which are mandatory for the nurses to experience satisfaction from their practice amidst the hectic and stressful work situations of handling critical patients and emergencies. The study suggests that nurses working in the community area need strong support systems from the

administration that will encourage them provide optimum supportive, educative and preventive services with high level of professionalism.

15. Significant relationship is identified between nurse practice environment and job satisfaction, and is stronger among the temporarily employed and the novice nurses as compared to the permanently employed and the competent and expert nurses. These findings throw light on the need to provide greater managerial leadership and support along with higher foundations for quality nursing practice that includes adequate staffing, resource availability, collegial team relations, clear job descriptions, etc. This will help the temporarily employed and novice nurses to experience greater job satisfaction. This strategy can also be aimed at improving the retention among nurses in the private sector.

16. The relationship between nurses' perception about stakeholders' image of a nurse and professionalism is statistically significant and is stronger for nurses working in autonomous sector as compared to the private and government sector. The relationship between nurse practice environment and job satisfaction is also stronger for the nurses working in the autonomous sector, as compared to those in the government and private sector. These findings suggest that administrators and nurse managers in the autonomous sector should plan and provide more intense support for the nurses. There should be adequate and clear job description, adequate staff development facilities, staff and resource availability and other requirements for providing adequate and efficient nursing care. This finding can also be considered as a hint to encourage these nurses to periodically work in rotation in the government sector so that the autonomous sector nurses get due exposure in handling critical and variety of patients and equipments and thereby gain confidence in providing efficient nursing care.

9.3   LIMITATIONS OF THE STUDY

1. The sample chosen for the study is exclusively from Goa. Though the sample may be representative of the nursing population across the world, a similar study conducted in a society with a widely diverse cultural or social background might give different results.

2. The scales were tested for construct validity and reliability. The models were checked for linear and structural level fit. Utmost measures were taken to avoid

common method bias, respondent bias as well as statistical errors by choosing appropriate data analysis methods based on the study objectives. However, any inadvertent errors that could have been further eliminated by using more sophisticated tools are beyond the scope of this study.

3. A longitudinal study conducted at repeated intervals might have improved the validity of the findings. However, considering the nature of the study and the sample size (1057 registered nurses, had 749 complete useful data), it was undertaken as a one shot correlational study.

9.4   DIRECTIONS FOR FUTURE RESEARCH

1. The nurse professionalism scale (NPS) can be further tested and/or used in research for exploring the construct in different settings. It might be appealing to use the scale to capture the professionalism behaviour among nurses in other states within the country or other developing countries.

2. Similar research can be conducted among other health care professionals using the profession specific code of professional conduct such as; doctors, pharmacists, physiotherapists, occupational therapist and dieticians.

3. A study can be conducted to identify the influence of the determinants on job satisfaction among members of different professions.

4. Longitudinal study will aid in exploring the influence of determinants on professionalism as well as the changes in level of professionalism among nurses over time. It may be especially interesting to use this scale to track professionalism among nurses in the different phases of career.

5. Longitudinal study can be conducted to explore the influence of determinants on job satisfaction among nurses at different phases of professional career.

6. Study can be conducted to explore the influence of the determinants on other constructs such as continuing professional development and professional commitment.

7. Exploring the influence of the additional behavioural determinant and/or other determinants such as work-life balance, personal support system, etc. can be considered in future research.

8. Data collection in the form of multisource feedback or different methods can be considered to capture professionalism which might yield different results.

9. Qualitative study to identify the factors influencing professionalism and or job satisfaction among nurses from different religions and sector of health care can be considered to acquire in depth understanding.

10. Comparative study can be undertaken to explore the influence of different stakeholders' image of a nurse on the behaviour and job satisfaction among nurses working in different sectors of health care.

9.5   CONCLUSION

Being a professional necessitates a societal agreement. The profession mandates integrity, competence and provision of altruistic service. Societal attitudes towards nurses' professionalism have been increasingly critical considering nurses as less competent, dependent and subordinate patient care providers. Nursing profession is threatened by several factors. For the improvement of the status of nurses and the nursing profession nurses need to understand and fulfil the commitments required to uphold professionalism in their practice.

This research was conducted to understand the influence of personal and environmental determinants on professionalism among nurses. The study adopted the concepts from the social cognitive theory as the theoretical basis for the research work wherein emotional intelligence was considered as the personal determinant, nurses' perception about stakeholders' image of a nurse was considered as the social environmental determinant, nurse practice environment as the physical environmental determinant and professionalism as behaviour.

The findings indicate a significant influence of emotional intelligence, nurse practice environment and nurses' perception about doctors and other hospital staffs' image of a nurse on professionalism among nurses. Nurse practice environment and emotional intelligence also have a significant influence on job satisfaction among nurses. Nurses' perception about stakeholders' image of a nurse had no influence on job satisfaction among nurses.

Significant interaction effects between the nurses' perception of some stakeholders' image of a nurse and nurse practice environment as well as emotional intelligence are identified as influencing professionalism among nurses.

The study also explored the mediation effects of job satisfaction on the relationships between the determinants and behaviour. The findings showed that job satisfaction fully mediates the relationship between nurse practice environment and professionalism and partially mediates the relationship between emotional intelligence and professionalism among nurses.

Testing for moderation effects of the demographic variables revealed that age, gender and level of health care sector did not have any moderating effects on any of the paths nor on the model, whereas marital status, religion, qualification, area of work, employment status, years of experience and sector of health care organisation had significant moderating effects on the model and/or path levels.

The study has resulted in significant theoretical contributions and presented implications for hospital administrators and nurse managers that can facilitate promotion of job satisfaction among nurses and higher levels of professionalism in their nursing care practice. The study has also suggested directions and scope for extension of research work in this area.

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APPENDIX A

Permission from Hospital Authorities

No. GMC/BH/MS/2018/ 406
Office of the Medical Supdt.
Goa Medical College,
Bambolim-Goa.

Dated: - 11/04/2018

To,
Ms. Ana M. Vaz e de Branganca,
Lecturer,
Institute of Nursing Education,
Bambolim-Goa.

Sub: - Permission to conduct the research regarding..

Sir,

With reference to your letter dated 3rd April 2018 this is to inform you that the Dean, Goa Medical College & Hospital, Bambolim-Goa has permitted you to conduct the research study on "Determinants of Professional among Nurses". It is kindly requested that your study should not interfere in any patient care while collecting the data

This is for your kind information.

Prof./(Dr. S. M. Bandekar)
Medical Superintendent
Goa Medical College
Bambolim-Goa.

Copy to:-
1. Matron, Goa Medical College, Bambolim-Goa. (to bring to the notice of ward sisters)
2. The Dean, Goa Medical College, Bambolim-Goa.

Government of Goa,
Institute of Psychiatry & Human Behaviour,
Bambolim, Goa – 403 202.
Phone No:-0832-2458687

No. IPHB/22/236//2006-EST/ Vol.II/044   Dated:- 04 /04/2018

To,
Ms. Ana M. Vaz e de Bragannca, Lecturer
Institute of Nursing Education,
Bambolim –Goa.

<u>Sub:- Permission to conduct research Study</u>

Madam,

With reference to the letter No. Nil , dated 22/2/2018 permission is hereby granted to you for conduct research study on the topic "Determinants of Professionalism among Nurses"

Further the data collected shall be strictly used for academic purpose and shall not revealed to any other people /organisation for any other purpose whatsoever.

Yours faithfully,

(Dr. Pradeep G. Naik)
Director/Dean
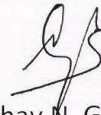
Copy to :-
1. The Medical Superintendent , IPHB, Bambolim-Goa.
2. The Matron, IPHB, Bambolim-Goa.
3. The Guard File.

No. ESIH/Misc/(4)/2018/ 480
Government of Goa,
Office of the E.S.I. Hospital,
Nr. Dr. Rajendra Prasad Stadium,
Margao – Goa.

Dated: 21|03|18

Sub: Permission to conduct research study.

With reference to your letter dated 20.03.2018 on the subject mentioned above, you are hereby granted permission to conduct the research study regarding collection of data from nurses at E.S.I. Hospital, Margao.

(Dr. Vibhav N. Gude)
Sr. Physician
Acting Incharge

To,

Ms. Ana M. Vaz e de Braganca
Lecturer,
Institute of Nursing Education,
Bambolim, Goa.

From,
Ms. Ana M. Vaz e de Braganca
Lecturer,
Institute of Nursing Eduation,
Bambolim, Goa.
Dated: 2|8|18

To,

The Medical Superint
Victor hospital
Margao Goa.

Sub: Requesting permission to conduct research study

Sir/Madam,

I, Ana Vaz e de Braganca, am registered as a part-time Ph. D. Scholar at the Department of Management Studies at the Goa University and working in the area of " Determinants of Professionalism among Nurses".

In this regard, I am required to collect data from nurses by administering tools related to the constructs in the study. I request you to kindly grant me the permission to contact the nurses in your hospital and interact with them in this process of data collection.

I assure you that the data collected will be strictly used for academic purpose and will not be revealed to any other people/organisation for any other purpose whatsoever.

Thank you.

Yours faithfully,

(Ana Vaz e de Braganca)

Enclosure: 1.Copy of the tools.
2. Letter from guide, Department of Management studies, Goa University.

ManipalHospitals
LIFE'S ON ✚

Dated: 22.03.2018

To,
Ms. Ana Maria Vaz e De Braganza
Reg No: 201511706
Department of Management Studies
Goa University

**Subject: Offer for Research work – "Determinants of Professionalism among Nurses"
(part fulfillment of PhD Research Scholar)**

Dear **Ms. Ana Maria Vaz E De Braganza,**

This has reference to the request from you, seeking permission to undergo **Research work – Determinants of Professionalism among Nurses** with us being the part fulfillment of your academic requirement for the PhD Research Scholar in Management Studies Domain.

We are pleased to inform you that you have been permitted as a Researcher for the period starting 2nd April 2018 to 2nd May 2018. This research is for a period mentioned above and unless and until renewed in writing, will automatically come to an end at the close of working hours on 2nd May 2018. At the end of your research, you will also be required to share your project report/analysis.

During the period of your research, you will be governed by the terms spelt out in the Annexure to this letter.

Please sign a copy of this letter in token of your acceptance of the above terms.

For Manipal Hospital - Goa
(A Unit of Manipal Health Enterprises Pvt. Ltd)

Abdul Khaleed Mohammad
Unit HR Head

HEALTHWAY
HOSPITAL · GOA

To,

Ms Ana M. Vaz e de Braganca

Lecturer,

Institute of Nursing Education,

Bambolim, Goa

Date: 15/03/2018

Sub: Permission Letter for conducting requested survey

Dear Ms Ana,

We at Healthway Hospitals Welcome you to our Hospital at Panaji & Old Goa to conduct your Research & Data Analysis.

I hope your visit will be beneficial. Kindly approach us for any further assistance.

Ashwin Furtado

Unit Head

Healthway Hospitals
Near People's High School
Fon... ...naji-Goa

Healthway (Kadamba) - Plot No. 132 / 1 (Part), Ella Village, Kadamba Plateau, Tiswadi Taluka, Goa.
PH. : 77700 10331. Email : info@healthwayhospitals.com
Healthway (Panaji) - Near People's High School, Fontainhas, Mala, Panaji - Goa.
Tel.: 0832 - 2424966, 2224966.

Emergency : +91 7770 010 333
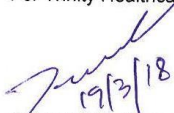
19th March, 2018.

<u>**TO WHOMSOEVER IT MAY CONCERN**</u>

We understand that Ms. Ana Vaz e de Braganca is a part time Ph. D. Scholar at the Department of Management Studies at the Goa University and is doing her thesis on "Determinants of Professionalism among Nurses'

She has approached our Hospital for conducting interviews with our Nurses and we have given her permission to conduct the said interviews during the working hours of our Nurses subject to the fact that any confidential information regarding the Hospital will be treated in a manner which will not have any adverse effect on the Hospital.

For Trinity Healthcare and Medical Research,

19/3/18

(Mr. Thomas Simoes)
Administrator.

781, St. Mary's Colony, Near Stella Maris Chapel, Miramar, Panaji, Goa. 403 001 - India ● Ph.: 0832-2462444, 2461888 ● E-mail: trinity.healthcarehospital@gmail.com

From,
Ms. Ana M. Vaz e de Braganca
Lecturer,
Institute of Nursing Eduation,
Bambolim, Goa.
Dated: 2nd March 2018.

To,
Mr. Kiran Kumar
General Manager
R.G. Stone urology Hospital
Porvorim Goa.

Sub: Requesting permission to conduct research study

Sir/Madam,

I, Ana Vaz e de Braganca, am registered as a part-time Ph. D. Scholar at the Department of Management Studies at the Goa University and working in the area of " Determinants of Professionalism among Nurses".

In this regard, I am required to collect data from nurses by administering tools related to the constructs in the study. I request you to kindly grant me the permission to contact the nurses in your hospital and interact with them in this process of data collection.

I assure you that the data collected will be strictly used for academic purpose and will not be revealed to any other people/organisation for any other purpose whatsoever.

Thank you.

Yours faithfully,

(Ana Vaz e de Braganca)

Enclosure: 1.Copy of the tools.
            2. Letter from guide, Department of Management studies, Goa University.

Approved to interact with the nurses and collect data

Date : 11th April 2018

To,
Ms. Ana Vaz de Braganza,
Lecturer,
Institute of Nursing Education,
Bambolim, Goa.

Madam,

With reference to your letter dated February, 23rd 2018, I am to inform you that you have been permitted to interact with the registered nurses employed at Vision Hospital, Mapusa, Goa, and collect the data for the purpose of your research work.

Yours sincerely

Savio De Souza
Hospital Administrator

From,
Ms. Ana M. Vaz e de Braganca
Lecturer,
Institute of Nursing Eduation,
Bambolim, Goa.
Dated: 23ʳᵈ February 2018

Ph: 9420687712
7030388359

To,
The chief Medical Officer
MPT Hospital
Vasco Goa.

Sub: Requesting permission to conduct research study

Sir/Madam,

I, Ana Vaz e de Braganca, am registered as a part-time Ph. D. Scholar at the Department of Management Studies at the Goa University and working in the area of " Determinants of Professionalism among Nurses".

In this regard, I am required to collect data from nurses by administering tools related to the constructs in the study. I request you to kindly grant me the permission to contact the nurses in your hospital and interact with them in this process of data collection.

I assure you that the data collected will be strictly used for academic purpose and will not be revealed to any other people/organisation for any other purpose whatsoever.

Thank you.

Yours faithfully,

(Ana Vaz e de Braganca)

Enclosure: 1. Copy of the tools.
2. Letter from guide, Department of Management studies, Goa University.

Approved,
Nursin suptd for n.g.

डॉ. निमिष व्ही. पिल्लई
DR. NIMISH V. PILLAI
MD DGO, FICOG
मुख्य चिकित्सा अधिकारी
CHIEF MEDICAL OFFICER
MPT HOSPITAL, HL SADA GOA
GMC Reg. No. 1705

APPENDIX B

ETHICAL APPROVAL

Goa Medical College

INSTITUTIONAL ETHICS COMMITTEE

Office: Dept of Pharmacology, Goa Medical College, Bambolim Complex, Goa
403202

Chairperson
Dr.Philomena DSouza
Cell:7769043243

Member Secretary
Dr Amey Kamat
Cell: 9822751356

Members
Dr Chitra Dhume
Cell: 9423061579
Dr. Rajesh Patil
Cell: 9970901121
Dr. Rakhi Ghodge
Cell: 9822150305
Dr. Jagadish Bhat
Cell:9673217939
Dr. Amit Dias
Cell: 9822382842
Mrs Pearl Monteiro
Cell: 9822386355
Mr. Sergio De Sa
Cell: 9822982824
Mr. Pradip Kamat
Cell: 9422445655

To,   Date: 3/2/18

Ms. Ana Maria Vaz e de Braganca

Lecturer, Institute of Nursing Education

Bambolim-Goa.

Sub: Review of study documents

This is to inform you that the IEC met on 2/2/18 at 3 pm and reviewed your study documents.

Title: Determinants of Professionalism among Nurses.

The study has been approved in its present form.

Any changes in protocol have to be brought to the notice of undersigned at the earliest

Yours Sincerely,

Dr. Amey Kamat.
MEMBER SECRETARY
Institutional Ethics Committee
Goa Medical College

Government of Goa
Directorate of Health Services
Special Cell, Campal, Panaji – Goa.   Tel. No. 2225646   Fax No. 2225561
E-mail: specialcelldhs@gmail.com

===
No. DHS/Sp.Cell/24-166(Ethics) /17-18//562   Dated: 15/01/2018
===

URGENT

To,
Principal,
Institute of Nursing Education,
Bambolim- Goa

      Sub: Conveyal of approval of the Ethical Committee

Madam,

      Enclosed please find the copy of the Minutes of the Meeting of the Ethical Committee held on 10/01/2018 wherein the following Project was approved :

      "Research study on "Determinants of Professionalism among Nurses" in District Hospitals, Community Health Centre and Primary Health Centre by Mrs. Ana Maria Vaz de Braganza lecturer of Institute of Nursing Education Bambolim- Goa.

                                    Yours faithfully,

                                    (Dr. Jose D'Sa)
                              Dy. Director (Public Health)

Encl: as above

CONSENT FORM

PART-I: INFORMATION SHEET

Introduction

I, Ms. Ana Maria Vaz e de Braganca, am registered as a part-time Ph. D. Scholar at the Department of Management Studies, Goa University. The area of my work is "**Determinants of Professionalism among Nurses**". In this context, I am required to collect data from nurses working in the different private, autonomous and public sector hospitals by administering the tools related to the constructs in the study.

Purpose of the study

Consumers demand cost effective, safe, competent and high quality health care services. The gratification of these demands necessitates services of not just experienced but highly professional nurses. Hence nurses have great responsibility to keep up with the increasing demands and changes in the health care, understand and master the changing work situations and yet, demonstrate professionalism in their routine practice as it influences patient satisfaction and health outcomes. This study will enable to identify the level of professionalism and the different factors influencing this behaviour among nurses.

Participant Selection

Staff nurses working in various government and private settings will be randomly selected as participants in this study.

Voluntary Participation

Your participation in this research is entirely voluntary. However, if you participate in this study it would be of immense help to me.

Procedure

You will be given the tools on Professionalism, Nurses' Perception about Stakeholders' Image of a Nurse, Nurse Practice Environment, Emotional Intelligence and Job Satisfaction. You are requested to provide relevant response on the items by placing a tick ( ) mark in the columns of the scales.

Risks

There are no risks involved in this research.

Benefits

Your participation in this study will help in identifying professionalism and the different factors influencing this behaviour among nurses. The findings can be further used for the benefit of nurses. Also, society might benefit due to the improved quality of healthcare.

Confidentiality

All information provided by you will be kept confidential. You are not required to reveal your identity in any manner for the purpose of this study.

Sharing of results

The findings of the research will be shared. However in no way your identity will be revealed to others.

PART-II: CERTIFICATE OF CONSENT

I have read the foregoing information and I consent voluntarily to participate as a research participant in the study.

Name of the participant: _____.

Signature of the participant: _____.

Date: _____.

I confirm that the participant was given the opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily by the participants.

Name of the researcher: _____.

Signature of the researcher: _____.

Date: _____.

APPENDIX D

Code of Professional Conduct for Nurses: Indian Nursing Council

(hmis.ap.nic.in/APNMC/pdfs/ethics.pdf)

1.   Professional Responsibility and accountability - Nurse

1.1 Appreciates sense of self-worth and nurtures it

1.2 Maintains standards of personal conduct reflecting credit upon the profession

1.3 Carries out responsibilities within the framework of the professional boundaries

1.4 Is accountable for maintaining practice standards set by Indian Nursing Council

1.5 Is accountable for own decisions and actions

1.6 Is compassionate

1.7 Is responsible for continuous improvement of current practices

1.8 Provides adequate information to individuals that allows them informed choices

1.9 Practices healthful behaviour

2. Nursing Practice - Nurse

2.1 Provides care in accordance with set standards of practice

2.2 Treats all individuals and families with human dignity in providing physical, psychological, emotional, social and spiritual aspects of care

2.3 Respects individuals and families in the context of traditional and cultural practices, promoting healthy practices and discouraging harmful practices

2.4 Presents realistic picture truthfully in all situations for facilitating autonomous decision-making by individuals and families

2.5 Promotes participation of individuals and significant others in the care

2.6 Ensures safe practice

2.7 Consults, coordinates, collaborates and follows up appropriately when individuals' care needs exceed the nurse's competence

3. Communication and Interpersonal Relationships -Nurse

3.1 Establishes and maintains effective interpersonal relationships with individuals, families and communities

3.2 Upholds the dignity of team members and maintains effective interpersonal relationship with them

3.3 Appreciates and nurtures professional role of team members

3.4 Cooperates with other health professional to meet the needs of the individuals, families and communities

4. Valuing Human Being - Nurse

4.1 Takes appropriate action to protect individuals from harmful unethical practice

4.2 Considers relevant facts while taking conscience decisions in the best interest of individuals

4.3 Encourages and supports individuals in their right to speak for themselves on issues affecting their health and welfare

4.4 Respects and supports choices made by individuals

5. Management - Nurse

5.1 Ensures appropriate allocation and utilization of available resources

5.2 Participates in supervision and education of students and other formal care providers

5.3 Uses judgment in relation to individual competence while accepting and delegating responsibility

5.4 Facilitates conductive work culture in order to achieve institutional objectives

5.5 Communicates effectively following appropriate channels of communication

5.6 Participates in performance appraisal

5.7 Participates in evaluation of nursing services

5.8 Participates in policy decisions, following the principle of equity and accessibility of services

5.9 Works with individuals to identify their needs and sensitizes policy makers and funding agencies for resource allocation

6. Professional Advancement -Nurse

6.1Ensures the protection of the human rights while pursuing the advancement of knowledge

6.2 Contributes to the development of nursing practice

6.3 Participates in determining and implementing quality care

6.4Takes responsibility for updating own knowledge and competencies

6.5 Contributes to core of professional knowledge by conducting a participating in research

APPENDIX E

PERMISSION OF ORIGINAL AUTHORS

TO USE THE TOOL

1.   Nurses' Perception about Stakeholders' Image of a Nurse

Ana Braganza <braganzaana@gmail.com>	Fri, Nov 17, 2017, 6:57 AM

to PorterR
Dear Madam/Sir,

I am a Lecturer at the Institute of Nursing Education, Goa currently pursuing my Ph. D. studies under the department of Management Studies, Goa University. The topic of my study is "Determinants of Professionalism among Nurses". For the purpose of data collection I have identified the tools and have adapted items from those tools.

One among the tools is the Porter and Porter Nursing Image Scale (1991) developed and used by you in the study "Career Development: Our Professional Responsibility". I request you kindly grant me permission to use this tool in my study. Your cooperation and support will be of immense value in my endeavour.

Thank you,

Warm regards,

Ana

Porter, Rose T. (Emeritus) <PorterR@health.missouri.edu>	Nov 17, 2017, 7:59 PM

to me
Yes, you may use the tool in any way that works for you.

Rose.

Ana Braganza <braganzaana@gmail.com>	Nov 18, 2017, 6:29 AM

to Rose
Dear Madam,

Thank you for your prompt response.

Ana.

Ana Braganza <braganzaana@gmail.com>

<div style="text-align:right">Nov 18, 2017, 6:32 AM</div>

to Rose

Madam,

I am sending the tools I wish to use in my study. It would be of immense value if you could validate the tools.
Looking forward for your support in my endeavour.

Thank you once again,

Ana.

Attachments area

Porter, Michael J. <PorterMJ@missouri.edu>

<div style="text-align:right">Nov 20, 2017, 8:47 PM</div>

to me, Rose

Dear Ana,

What a great study you've put together.

We really like how you have adopted the Porter Nursing Image Scale to fit your study. Very clever adaptation of our original design.

We have one issue we want you to think about: It is possible, that each of these sub-groups (doctors, patients, relatives, other hospital staff), could have a separate response for each of these questions; i.e.: a doctor may see a nurse as submissive, and a patient see the nurse as powerful.

So you must be more clear in your instructions, and consider who is the respondent speaking for? Is it for themselves, from a patient's perspective, from the nurses's perspective. It will vary greatly.

In fact, you could easily have your sample respond to the bipolar terms basing their responses on their perceptions of what physicians would say, or again, on what a patient would say. (see where I'm going with this?)

Otherwise, yes, very good.

Best Wishes,

Michael J. Porter
Emeritus Professor
Communication
University of Missouri

From: "Porter, Rose T. (Emeritus)" <PorterR@health.missouri.edu>
Date: Saturday, November 18, 2017 at 8:39 AM
To: Michael Porter <portermj@missouri.edu>
Subject: FW: permission to use the tool

Do you understand what she is asking for. To validate the tools.
....
[Message clipped] View entire message

Ana Braganza <braganzaana@gmail.com>

<div align="right">Nov 20, 2017, 10:26 PM</div>

to Michael

Dear Sir and Madam,

Thank you so much for your support and wishes. Actually the plan is to gather data from each sample nurse separately on the perceived image with respect to doctors, patients, other hospital staff and the nurse herself/himself. This means I will be gathering date on one construct from individual sample with regards to the perception of a nurse in relation to four different reference groups.

I really feel motivated by your response. Thank you once again.

Warm regards.
Ana.

Porter, Michael J. <PorterMJ@missouri.edu>

<div align="right">Nov 21, 2017, 1:54 AM</div>

to me

Great; Sounds like a very solid research project. Best Wishes,

Michael Porter

...

2. Nurse Practice Environment

From: Ana Braganza [mailto:braganzaana@gmail.com]
Sent: Thursday, June 29, 2017 11:48 PM
To: Lake, Eileen T <elake@nursing.upenn.edu>
Subject: Request for the details of the research tool

Dear Madam,

I am a research scholar pursuing my Ph. D. studies at the University, Goa, India. The topic of my research is "Determinants of professionalism among nurses". One among the determinants in the study is the nurse practice environment. I am currently exploring the available tools on this construct so that accordingly I can adopt, adapt or may be develop a tool suitable for our setting.

The Practice Environment Scale of the Nursing Work Index (PES-NWI) developed by you and used by various researchers is extremely interesting and valuable.

I would be extremely grateful to you if you could send me the tool or the details of the same. Also I am unclear about the classification of the practice environment based on the scores.

Thank you,

With gratitude and warm regards,

Ana Vaz.

Barol, Andrea L. <ajb@nursing.upenn.edu>

Thu, Aug 24, 2017, 11:54 PM

to me

Dear Ana Vaz:

Thank you for your email to Dr. Lake. Enclosed, please find the instrument, scoring instructions, an article containing PES-NWI scores for ANCC Magnet hospitals from 1998 in Table 1, and a Warshawsky & Haven article you may find useful. These materials are sent to everyone who makes the request.

Dr. Lake's permission is not needed as the instrument is in the public domain due to its endorsement by the National Quality Forum in 2004 and re-endorsement in 009: http://www.qualityforum.org/QPS/QPSTool.aspx?m=1129&e=3. However, if you prefer to have Dr. Lake's permission, this email serves as her permission.
Please direct any reply to Dr. Eileen Lake at elake@nursing.upenn.edu . If you need anything else, feel free to write to us again.

Andrea Barol
Research Center Coordinator
Center for Health Outcomes and Policy Research
University of Pennsylvania School of Nursing
418 Curie Boulevard, 378R, Philadelphia, PA 19104
215-898-4727 (Office) | 215-573-2062 (Fax)
215-746-2954 (Library) |215-573-5068 (Conf Room)

Ana Braganza <braganzaana@gmail.com>

Sat, Nov 18, 2017, 10:47 AM

to elake

Dear Madam,

Thnk You Madam for permitting me to use the tool in my study "Determinants of Professionalism among Nurses". For the purpose of data collection I have adapted items from those tools.

I request you to validate and give your valuable comments and suggestions regarding the same. Your guidance will be of immense value in my endeavour.

Thank you,

Warm regards,

Ana
Attachments area

Lake, Eileen T <elake@nursing.upenn.edu>

Thu, Nov 23, 2017, 3:50 AM

to me

Dear Ms. Braganza,
Thank you for your request. I give my permission for you to use the instrument.
I see that you are adapting the PES-NWI. Keep in mind that your results will not be comparable with other published results.
I am copying Ms. Barol who will send the instrument and related resources.
Best wishes,
Eileen Lake
 Eileen T. Lake, PhD, RN, FAAN
Jessie M. Scott Term Chair in Nursing and Health Policy

Associate Professor of Sociology
Associate Director, Center for Health Outcomes and Policy Research
School of Nursing Constituency Representative, University Faculty Senate Executive Committee
University of Pennsylvania School of Nursing
Room 302 Fagin Hall, 418 Curie Blvd.
Philadelphia, Pennsylvania 19104-4217
tel: (215) 898-2557
Website: http://www.nursing.upenn.edu/CHOPR

3.   Emotional Intelligence Scale

Ana Braganza <braganzaana@gmail.com>	Mon, Jan 22, 2018, 5:05 AM

to mnlaw, bcc: cswong
Dear Madam,

I am a research scholar pursuing my Ph. D. studies at the University, Goa, India. The topic of my research is "Determinants of professionalism among nurses". One among the determinants in the study is Emotional Intelligence. I am currently exploring the available tools on this construct so that accordingly I can adopt, adapt or may be develop a tool suitable for our setting.

The 16 item Wong and Law Emotional Intelligence (WLEIS. 2002) developed by you and used by various researchers is extremely interesting and valuable. However, I am not able to access the full text of your article title" Wong, C. S., & Law, K. S. (2002). The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study. The Leadership Quarterly, 13, 243–274", which would give me the details.

I would be extremely grateful to you if you could send me the tool or the details of the same.

Thank you,

With gratitude and warm regards,

Ana Vaz.

Chi Sum Wong (MGT) <wongcs@cuhk.edu.hk>	Mon, Jan 22, 2018, 9:08 AM

to me
Dear Ana,

So far as you are using the scale for non-profit making research projects, feel free to use it. In case you do not have, attached are papers reporting the development and validation of the scale. Good luck to your study.

Regards,
C.S. Wong
Dept. of Management
The Chinese University of Hong Kong

Ana Braganza <braganzaana@gmail.com>	Tue, Jan 23, 2018, 8:11 AM

to Chi
Thank you Madam for you prompt and valuable response.

Regards,
Ana.

4. Job satisfaction tool

Ana Braganza <braganzaana@gmail.com> | Sun, Sep 24, 2017, 10:24 AM

 to helenamartins
Dear Madam,

I am a Ph. D. Scholar at the Goa University, India, pursuing my research in the area of "Determinants of Professionalism among Nurses". One of my variables is general job satisfaction.

Recently I came across your work on "Minnesota Satisfaction Questionnaire - Psychometric Properties and Validation in a Population of Portuguese Hospital Workers". Working papers. FEP 2012. It would be of great help if you could provide me with some material related to the measurement of general job satisfaction for nurses which I could use for data collection in my study. Also your suggestions would be highly appreciated.

Thank you.

Regards,

Ana Vaz.

to tproenca

Helena G Martins <helenagmartins@gmail.com> | Fri, Sep 29, 2017, 5:21 PM

to me
Dear Ana Vaz,

I think that the information in the paper is quite extensive, but if you need anything in particular, please do let me know.
Best wishes,
HM

Ana Braganza <braganzaana@gmail.com> | Sun, Oct 1, 2017, 2:48 PM

to Helena
Thank you for your prompt response. I shall contact you if necessary.
Regards,
Ana

Ana Braganza <braganzaana@gmail.com> | Feb 18, 2018, 11:13 AM

to Helena
Dear Madam,

Thank you for your prompt response and support during my earlier correspondence with you.
I have decided to use the "MINNESOTA SATISFACTION QUESTIONNAIRE ". It would be of immense help in my study if you could grant me permission to adapt the tool.

Thank you,
Warm regards,
Ana.

Ana Braganza <braganzaana@gmail.com>

<div align="right">Feb 18, 2018, 11:25 AM</div>

to Teresa

Dear Madam,

I am a Lecturer at the Institute of Nursing Education, Goa currently pursuing my Ph. D. studies under the department of Management Studies, Goa University. The topic of my study is "Determinants of Professionalism among Nurses". For the purpose of data collection I have identified the tools and have adapted items from those tools. One among these tools is the "MINNESOTA SATISFACTION QUESTIONNAIRE", developed and used by you.

.

I request you to kindly permit me to use this tool in my study. Your support and cooperation will be of immense value in my endeavour.

Helena G Martins <helenagmartins@gmail.com>

<div align="right">Mon, Feb 19, 2018, 3:48 PM</div>

to me

Hello, Ana,

This is not my intellectual property; you should contact the University of Minnesotta.

Best of luck,

HM

Ana Braganza <braganzaana@gmail.com>

<div align="right">Tue, Feb 20, 2018, 6:14 AM</div>

to Helena

Thank you Madam for for prompt response.

Regards,

Ana.

Ana Braganza <braganzaana@gmail.com>

<div align="right">Fri, Nov 17, 2017, 6:50 AM</div>

to Helena

Dear Madam,

For the purpose of data collection in my study is "Determinants of Professionalism among Nurses" I have identified the tools and have adapted items from those tools. I request you to validate and give your valuable comments and suggestions regarding the same. Your guidance will be of immense value in my endeavour.

Thank you,

Warm regards,

Ana.

Jan 29, 2020, 6:58 AM
Ana Braganza <braganzaana@gmail.com>
to vpr@umn.edu
Dear Madam/Sir,

I am a Lecturer at the Institute of Nursing Education, Goa currently pursuing my Ph. D. studies under the department of Management Studies, Goa University. The topic of my study is "Determinants of Professionalism among Nurses". For the purpose of data collection I have identified the tools and have adapted items from those tools. One among these tools is the "MINNESOTA SATISFACTION QUESTIONNAIRE" (Short version).

I request you to kindly permit me to use this tool in my study. Your support and cooperation will be of immense value in my endeavour.

Thank you.

Ana.

vpr Vocational Psychology Research   6:59 AM

to me

Thank you so much for your interest in the University of Minnesota's Vocational Psychology Research Center's assessments. At this time we are transitioning to a Creative Commons license and will no longer be charging for the use of our assessments. You can access samples of the assessments as well as the manuals online here: Website. You may use the measures free of charge, but not for profit, by creating digital reproductions of the samples available online. Please note that this office and the University of Minnesota are unable to provide consultation on the measures or their scoring. We encourage you to read the manuals (found on our Website) and review the literature thoroughly prior to using any measures from our website.

Vocational Psychology Research
University of Minnesota

INTER RATER RELIABILITY FORM

Dear Expert,

Kindly assess the readability, comprehensiveness, redundancy and appropriateness of the items in the tool and give your valuable suggestions and expert guidance to make this study complete and contributory. Data collection from registered nurses will be done by using the Nurse Professionalism Scale which is developed using the Code of Professional Conduct for Nurses in India by Indian Nursing Council

Operational Definition:

• **Professionalism**: The demonstration of behaviours by a nurse in accordance with the Code of Professional Conduct for Nurses by the Indian Nursing Council.

Instructions: You are required to review the items for readability, comprehensiveness, redundancy and appropriateness of the items and the dimensions as given in the Code of Professional Conduct for Nurses by the Indian Nursing Council.

No	Dimensions	Abbreviation
I	Professional Responsibility and Accountability	PRA
II	Nursing Practice	NP
III	Communication and Interpersonal Relationships	CIR
IV	Valuing Human Being	VHB
V	Management	MAN
VI	Professional Advancement	PA
VII	Not Applicable	NA

Instructions: Please tick only one appropriate column.								
(The code of professional conduct is provided for your reference*)								
No	Items	PRA	NP	CIR	VHB	MAN	PA	NA
1	Appreciates sense of self-worth and nurtures it.							
2	Maintains standards of personal conduct reflecting credit upon the profession							
3	Carries out responsibilities within the framework of the professional boundaries.							
4	Is accountable for maintaining practice standards set by Indian Nursing Council.							
5	Is accountable for own decisions and actions.							
6	Is compassionate.							
7	Is responsible for continuous improvement of current practices.							
8	Provides adequate information to individuals that allow them informed choices.							
9	Practices healthful behaviour							
10	Provides care in accordance with set standards of practice							
11	Treats all individuals and families with human dignity in providing physical, psychological, emotional, social and spiritual aspects of care.							
12	Respects individuals and families in the context of traditional and cultural practices, promoting healthy practices and discouraging harmful practices.							
13	Presents realistic picture truthfully in all situations for facilitating autonomous decision-making by individuals and families.							
14	Promotes participation of individuals and significant others in the care.							
15	Ensures safe practice							
16	Consults, coordinates, collaborates and follows up appropriately when individuals' care needs exceed the nurse's competence.							
17	Establishes and maintains effective interpersonal							

	relationships with individuals families and communities.							
18	Upholds the dignity of team members and maintains effective interpersonal relationship with them.							
19	Appreciates and nurture professional role of team members.							
20	Cooperates with other health professional to meet the needs of the individuals, families and communities.							
21	Takes appropriate action to protect individuals from harmful unethical practice.							
22	Considers relevant facts while taking conscious decisions in the best interest of individuals							
23	Encourages and supports individuals in their right to speak for themselves on issues affecting their health and welfare.							
24	Respects and supports choices made by individuals							
25	Ensures appropriate allocation and utilization of available resources.							
26	Participates in supervision and education of students and other formal care providers.							
27	Uses judgment in relation to individual competence while accepting and delegating responsibility.							
28	Facilitates conducive work culture in order to achieve institutional objectives.							
29	Communicates effectively following appropriate channels of communication							
30	Participates in performance appraisal							
31	Participates in evaluation of nursing services.							
32	Participates in policy decisions, following the principle of equity and accessibility of services.							
33	Works with individuals to identify their needs and sensitizes policy							

	makers and funding agencies for resource allocation							
34	Ensures the protection of the human rights while pursuing the advancement of knowledge							
35	Contributes to the development of nursing practice.							
36	Participates in determining and implementing quality care.							
37	Takes responsibility for updating own knowledge and competencies.							
38	Contributes to core of professional knowledge by conducting and participating in research							
	Any other comments and suggestions							

* Code of Professional Conduct For Nurses by Indian nursing council was attached (Refer Appendix D).

CONTENT VALIDITY THROUGH EXPERT RATINGS AND SUGGESTIONS

Respected Sir/Madam,

I am a Ph.D. scholar in the department Management studies, Goa University, Goa. The topic of my Ph.D. research study is "Determinants of Professionalism among Nurses". This cross-sectional study will include a randomly selected sample of about 1000 nurses from the private, autonomous as well as government sector within the state of Goa.

The objectives of my study are:
1. To test the difference in the nurses' perception about the stakeholders' image of a nurse.

2. To identify the influence of the personal and environmental determinants on professionalism among nurses.

3. To identify the influence of the personal and environmental determinants on job satisfaction among nurses.

4. To identify the influence of job satisfaction on professionalism among nurses.

5. To test the interaction effect of the determinants on professionalism among nurses.

6. To evaluate the mediation effect of job satisfaction on the relationship between the determinants and professionalism among nurses.

7. To estimate the moderation effect of the demographic variables on the relationship between the determinants and professionalism and job satisfaction among nurses.

Variables included:
• **Independent Variables**: Nurses' Perception about Stakeholders' Image of a Nurse, Nurse Practice Environment, Emotional Intelligence
• **Dependent Variable**: Professionalism
• **Mediating variable**: Job Satisfaction
• **Moderators**: Age, Religion, Gender, Qualification, Marital Status, Area of Work, Sector, Level of Organisation , Employment status and Experience.

Target Population: Registered nurses working in the different settings within the state of Goa.

Sample and Sampling Technique: Purposive sampling of hospitals and stratified random sampling of registered nurses

Operational Definitions:

• **Nurse**: A person who has undergone training in a professional nursing programme of minimum three years duration in a recognized institution and is registered under the Goa state nursing council.

• **Professionalism**: The demonstration of behaviours by a nurse in accordance with the Professional code of conduct by the Indian Nursing Council.

• **Nurses' Perception about Stakeholders' Image of a Nurse** refers to the nurses' perception and beliefs of how they are viewed by the stake holders; namely doctors, patients, other hospital staff, and also by themselves within their working environment with respect to the nurse's interpersonal power, interpersonal relations and intrapersonal ability.

• **Nurse Practice Environment** is defined as the organizational characteristics of the work setting that facilitate or constrain professional nursing practice.

• **Emotional Intelligence** refers to the ability to perceive, understand, regulate and manage self and others' emotions while coping with environmental pressure and demands.

• **Job Satisfaction** refers to the overall pleasurable or positive emotional state resulting from the appraisal of one's job experiences.

The following instruments have been identified for the purpose of data collection in my study

- Code of Professional Conduct for Nurse: Indian Nursing Council
- Porter Nursing Image Scale (Porter & Porter 1991).
- Nurse Practice Environment Scale (PES-NWI): (Lake E.T. 2002).
- Wong and Law Emotional Intelligence Scale (WLEIS. 2002)
- The Minnesota Satisfaction Questionnaire (Weiss, Dawis, England and Lofquist. 1967. The 20 MSQ-short version)

Data Collection Tools

Professionalism among nurses will be measured using the scale developed using the Code of Professional Conduct for Nurse: Indian Nursing Council. All the items in the CPCNI-INC are rephrased and retained. Data regarding Nurses' Perception about Stakeholders' Image of a Nurse, Nurse Practice Environment, Emotional Intelligence and Job Satisfaction will be collected using the tools adapted based on the identified standardised tools. The original tools are also enclosed for your reference.

I request you to check the developed and the adapted tools for the appropriateness of:
i)   Content (content validity)
ii) Format
iii) Response system
iv) Language
v)   Suitability for the sample

Kindly give your valuable suggestions and expert guidance to make this study complete and contributory. Kindly return the validated tools back by December 20, 2017 (revalidation by February 15, 2018).

With kind regards,

Yours faithfully,

(Ana Vaz e de Braganza)
Ph.D. Scholar

Guide
Dr. Nirmala R.
Assistant Professor,
Department of Management Studies,
Goa University, Goa.

Kindly give your response on a 4-point ordinal scale
For **relevancy** as:
1. not relevant
2. somewhat relevant and needs some revision
3. quite relevant but needs minor revision
4. very relevant

For **clarity** as:
1. not clear
2. somewhat clear and needs some revision
3. clear but needs minor revision
4. very clear.

Demographics:

Instructions for respondents: Kindly tick mark against **the most suitable** option given against the variables.

Age: 20-30 years: 30-40 years; 40-50 years; 50-60 years
Gender: Male/Female
Marital status: Married/Single
Religion: Christian/Hindu/Muslim/ Others
Qualification: GNM/B.Sc./M.Sc.
Area of work: Medicine/Surgery/Obstetrics/Paediatric/ICU-OT/Psychiatry/ Community
Employment status: Permanent/temporary
Years of experience: 1-3years (Novice); 3-10years (Advanced Group); more than 10 years (Domain Experts) (Herald Meig. 2008)
Sector: Private /Government/Autonomous

TOOLS

NURSE PROFESSIONALISM SCALE

Original Code of Professional Conduct for Nurses in India: Indian Nursing Council

I	**Professional Responsibility and accountability – Nurse:**
1	Appreciates sense of self-worth and nurtures it
2	Maintains standards of personal conduct reflecting credit upon the profession
3	Carries out responsibilities within the framework of the professional boundaries
4	Is accountable for maintaining practice standards set by Indian Nursing Council
5	Is accountable for own decisions and actions
6	Is compassionate
7	Is responsible for continuous improvement of current practices
8	Provides adequate information to individuals that allows them informed choices
9	Practices healthful behaviour
II	**Nursing Practice– Nurse:**
10	Provides care in accordance with set standards of practice
11	Treats all individuals and families with human dignity in providing physical, psychological, emotional, social and spiritual aspects of care
12	Respects individuals and families in the context of traditional and cultural practices, promoting healthy practices and discouraging harmful practices
13	Presents realistic picture truthfully in all situations for facilitating autonomous decision-making by individuals and families
14	Promotes participation of individuals and significant others in the care
15	Ensures safe practice

16	Consults, coordinates, collaborates and follows up appropriately when individuals' care needs exceed the nurse's competence
III	**Communication and Interpersonal Relationships –Nurse:**
17	Establishes and maintains effective interpersonal relationships with individuals, families and communities
18	Upholds the dignity of team members and maintains effective interpersonal relationship with them
19	Appreciates and nurtures professional role of team members
20	Cooperates with other health professional to meet the needs of the individuals, families and communities
IV	**Valuing Human Being – Nurse:**
21	Takes appropriate action to protect individuals from harmful unethical practice
22	Considers relevant facts while taking conscience decisions in the best interest of individuals
23	Encourages and supports individuals in their right to speak for themselves on issues affecting their health and welfare
24	Respects and supports choices made by individuals
V	**Management – Nurse:**
25	Ensures appropriate allocation and utilization of available resources
26	Participates in supervision and education of students and other formal care providers
27	Uses judgment in relation to individual competence while accepting and delegating responsibility
28	Facilitates conductive work culture in order to achieve institutional objectives
29	Communicates effectively following appropriate channels of communication
30	Participates in performance appraisal
31	Participates in evaluation of nursing services
32	Participates in policy decisions, following the principle of equity and accessibility of services
33	Works with individuals to identify their needs and sensitizes policy makers and funding agencies for resource allocation
VI	**Professional Advancement –Nurse:**
34	Ensures the protection of the human rights while pursuing the advancement of knowledge
35	Contributes to the development of nursing practice
36	Participates in determining and implementing quality care
37	Takes responsibility for updating own knowledge and competencies
38	Contributes to core of professional knowledge by conducting and participating in research

Nurse Professionalism Scale: Developed using the Conduct of Professional Code for Nurses in India: Indian Nursing Council. (Some items are reframed and all are retained).

Instructions for respondents:

This tool contains items which describe your professional behaviour while performing your roles and responsibilities related to the patient care activities. You are required to tick mark in the appropriate column against the six options for each item which are scored as follows:

0=Not Applicable; 1=Never; 2= Rarely; 3= Sometimes; 4= Mostly and 5= Always

No	Dimensions	Relevanc				Clarity			
		1	2	3	4	1	2	3	4
I	**Professional Responsibility and Accountability.**								
1	I have a sense of self-worth as a nurse professional and nurture it.								
2	I maintain standards of conduct which add to the respect/status of the profession								
3	I carry out nursing responsibilities within the framework of professional boundaries.								
4	I accept accountability for maintaining practice standards set by Indian Nursing Council								
5	I accept accountability for my own decisions and actions.								
6	I am compassionate while performing the nursing care activities								
7	I take responsibility for continuous improvement of current nursing care practices.								
8	I provide adequate information to patients and significant others that allows them to make informed choices.								
9	I practice healthy behaviour.								
II	**Nursing Practice**								
10	I provide care in accordance with set standards of practice.								
11	I treat patients and their significant others with human dignity while providing holistic nursing care.								
12	I respect the traditional and cultural practices of patients and their significant others while promoting healthy practices and discouraging harmful practices.								
13	I present realistic and truthful picture in all situations to facilitate autonomous/independent decision-making by patients and their significant others.								
14	I promote participation of patients and their significant others in the care								
15	I ensure safe practice of care for self and patients.								
16	I consult with team members and follow up appropriately when patients care needs exceed my competence.								
III	**Communication and Interpersonal Relationships**								
17	I establish and maintain effective interpersonal								

	relationships with patients and their significant others.									
18	I respect and maintain effective interpersonal relationship with team members.									
19	I acknowledge the professional role of team members									
20	I cooperate with other health professionals to meet the needs of the patients and their significant others.									
IV	**Valuing Human Being**									
21	I take appropriate action to protect patients from harmful and unethical practice.									
22	I consider relevant facts while taking decisions in the best interest of patients.									
23	I encourage and support patients in their right to speak for themselves on issues affecting their health and welfare.									
24	I respect and support choices made by patients.									
V	**Management**									
25	I ensure appropriate allocation and utilization of available resources.									
26	I participate in supervision and education of students									
27	I use judgment in relation to individual competence while delegating responsibility to colleagues, patients and relatives.									
28	I facilitate conducive work culture in order to achieve patient care objectives.									
29	I communicate effectively with superiors, team members and subordinates following appropriate channels of communication.									
30	I participate in the performance appraisal of self and others.									
31	I participate in the evaluation of nursing services.									
32	I participate in policy decisions related to patient care services									
33	I work with patients to identify their needs and sensitize policy makers and funding agencies for resource allocation.									
VI	**Professional Advancement**									
34	I ensure the protection of the human rights while pursuing the advancement of knowledge.									
35	I contribute to the development of nursing practice.									
36	I participate in determining and implementing quality care.									
37	I take responsibility for updating my own knowledge and competencies.									
38	I contribute to core of professional knowledge by conducting and participating in research.									
Comments/ Suggestions:										

NURSES' PERCEPTION ABOUT STAKEHOLDERS' IMAGE OF A NURSE SCALE

Nurses' Perception about Stakeholders' Image of a Nurse Scale: Adapted from Porter Nursing Image Scale (Porter, R. T. & and Porter, M.J. 1991. Career development: Our Professional Responsibility, J. Professional Nursing, 7: 208-212). Nurses perceive how the society sees themselves in various ways. For example, they may perceive the public image of nurses through the interactions with patients, physicians, friends or through the media. The following questionnaire was originally developed by Porter and Porter (1991) to assess nurses' self-image.

Instructions in the original scale: Items contained in the questionnaire are matched-pair, bipolar adjectives. In this section, using this questionnaire you are required to rate how you think the public view nurses. Please circle an appropriate number which reflects your opinion in each question. The smallest number "**1**" indicates strong agreement with the adjectives on the left hand side column, and the biggest number "**7**" indicates strong agreement with the adjectives on the right hand side column. Number "**4**" means neutral.

I think the public view nurses as being:

I	Inter-Personal Power							
1	Leader	1	2	3	4	5	6	7	Follower
2	Powerful	1	2	3	4	5	6	7	Weak
3	Confident	1	2	3	4	5	6	7	Uncertain
4	Strong	1	2	3	4	5	6	7	Weak
5	Bold	1	2	3	4	5	6	7	Timid
6	Dominant	1	2	3	4	5	6	7	Submissive
7	Influential	1	2	3	4	5	6	7	Ineffective
8	Active	1	2	3	4	5	6	7	Passive
9	Intelligent	1	2	3	4	5	6	7	Dumb
10	Outgoing	1	2	3	4	5	6	7	Reserved
11	Independent	1	2	3	4	5	6	7	Dependent
12	Scientific	1	2	3	4	5	6	7	Non-scientific
13	Professional	1	2	3	4	5	6	7	Technical
II	**Inter-Personal Relations**							
14	Compassionate	1	2	3	4	5	6	7	Cold
15	Nurturing	1	2	3	4	5	6	7	Non-caring
16	Warm	1	2	3	4	5	6	7	Indifferent
17	Sympathetic	1	2	3	4	5	6	7	Insensitive
18	Patient	1	2	3	4	5	6	7	Hasty
19	Friendly	1	2	3	4	5	6	7	Cold
20	Cheerful	1	2	3	4	5	6	7	Gloomy

21	Respectful	1	2	3	4	5	6	7	Discourteous
22	Responsible	1	2	3	4	5	6	7	Irresponsible
23	Compromising	1	2	3	4	5	6	7	Rigid
III				**Intra-Personal Ability**					
24	Organized	1	2	3	4	5	6	7	Unprepared
25	Rational	1	2	3	4	5	6	7	Unreasonable
26	Competent	1	2	3	4	5	6	7	Inefficient
27	Neat	1	2	3	4	5	6	7	Sloppy
28	Logical	1	2	3	4	5	6	7	Illogical
29	Logical	1	2	3	4	5	6	7	Intutive
30	Controlled	1	2	3	4	5	6	7	Emotional

Adapted Nurses' Perception about Stakeholders' Image of Nurse Scale

Many of the adjectives in the original tool mean the same. Also there are many constructs in this study. Hence in order to reduce the length of the overall tool and the time to obtain data from each sample the adjectives meaning the same are collapsed and reduced.

Instruction for respondents: Items contained in the questionnaire are matched-pair, bipolar adjectives. In this section, using this questionnaire you are required to rate how you think the public (doctors, patients, other hospital staff and nurses themselves) view a nurse. Please circle an appropriate number which reflects your opinion in each question. The smallest number "**1**" indicates strong agreement with the adjectives on the left hand side column, and the biggest number "**7**" indicates strong agreement with the adjectives on the right hand side column. Number "**4**" means neutral.

I think the stakeholder views a nurse as being:

No	Dimensions			Relevance				Clarity			
				1	2	3	4	1	2	3	4
I		**Inter-Personal Power**									
1	Powerful	1 2 3 4 5 6 7	Submissive								
2	Confident	1 2 3 4 5 6 7	Uncertain								
3	Intelligent	1 2 3 4 5 6 7	Unintelligent								
4	Independent	1 2 3 4 5 6 7	Dependent								
5	Competent	1 2 3 4 5 6 7	Incompetent								
II		**Inter-Personal Relations**									
6	Caring	1 2 3 4 5 6 7	Indifferent								
7	Friendly	1 2 3 4 5 6 7	Unfriendly								
8	Respectful	1 2 3 4 5 6 7	Rude								
9	Responsible	1 2 3 4 5 6 7	Irresponsible								

10	Collaborative	1 2 3 4 5 6 7	Uncooperative								
III		**Intra-Personal Ability**									
11	Organized	1 2 3 4 5 6 7	Disorganized								
12	Logical	1 2 3 4 5 6 7	Unreasonable								
13	Punctual	1 2 3 4 5 6 7	Unpredictable								
14	Honest	1 2 3 4 5 6 7	Dishonest								

Comments/ Suggestions:

NURSE PRACTICE ENVIRONMENT SCALE

Nurse Practice Environment Scale: Adapted from the (PES-NWI) Scale: (Lake E.T. 2002. Development of the practice environment scale of the Nursing Work Index. Research in Nursing & Health 25(6), 176-188).

Instructions in the Original Tool: Indicate the extent to which each item applies to your practice environment using the following scale: **1= strongly disagree; 2= disagree; 3= agree; 4= strongly agree**

No.	Dimension
I	**Nurse Participation in Hospital Affairs**
1	Staff nurses are involved in the internal governance of the hospital (e.g., practice and policy committees).
2	Opportunity for staff nurses to participate in policy decisions.
3	Staff nurses have the opportunity to serve on hospital and nursing committees
4	Opportunities for advancement
5	Career development/clinical ladder opportunity
6	Administration that listens to and responds to employee concerns
7	Nursing administrators consult with staff on daily problems and procedures
8	A chief nursing officer who is highly visible and accessible to staff
9	A chief nursing officer equal in power and authority to other top level hospital executives
II	**Nursing Foundations for Quality of Care**
10	Use of nursing diagnoses
11	An active quality assurance program
12	A preceptor program for newly hired nurses
13	Nursing care is based on a nursing, rather than a medical model.
14	Patient care assignments that foster continuity of care, i.e., the same nurse cares for the patient from one day to the next.
15	A clear philosophy of nursing that pervades the patient care environment
16	Written, up-to-date nursing care plans for all patients.
17	High standards of nursing care are expected by the administration
18	Active staff development or continuing education programs for nurses
19	Working with nurses who are clinically competent
III	**Nurse Manager Ability, Leadership, and Support of Nurses**

20	A nurse manager who is a good manager and leader
21	A nurse manager who backs up the nursing staff in decision making, even if the conflict is with a physician
23	A supervisory staff that is supportive of the nurses
22	Supervisors use mistakes as learning opportunities, not criticism
24	Praise and recognition for a job well done
IV	**Staffing and Resource Adequacy**
25	Enough staff to get the work done
26	Enough registered nurses to provide quality patient care
27	Adequate support services allow me to spend time with my patients.
28	Enough time and opportunity to discuss patient care problems with other nurses.
V	**Collegial Nurse–Physician-Team Relations**
29	A lot of teamwork between nurses and doctors
30	Physicians and nurses have good working relationships
31	Collaboration (joint practice) between nurses and physicians.

Adapted Nurse Practice Environment Scale
Some items from the original tool which are not applicable in our settings and those items which are similar are deleted and or merged. Certain items which were thought as important and not included are added based on literature review and discussion with experts. Some are reworded for clarity.

Instruction for respondents: Indicate the extent to which each item applies to your practice environment by placing a tick mark in the columns against each item in the scale. The scoring of the scale is as follows:
1= strongly disagree; 2= disagree; 3= neither disagree nor agree; 4= agree; 5= strongly agree
In My Work Practice Environment

NO	Dimension	Relevance				Clarity			
		1	2	3	4	1	2	3	4
I	**Nurse Participation in Hospital Affairs**								
1	I have opportunity to participate in hospital policy decisions and nursing department committees								
2	The administration listens and responds to staff on daily problems and procedures								
3	The matron is equal in power and authority to other top level hospital executives								
4	The matron is always visible and accessible to staff								
II	**Foundations for Nursing Quality of Care**								
5	There is quality assurance program which helps in maintaining and improving quality of nursing care								
6	There is orientation program for newly hired nurses								
7	There is a clear philosophy of nursing that permeates the patient care environment								
8	There are in-service/continuing education programs for nurses								
9	I have opportunity to work with nurses who are								

	clinically competent									
10	I have opportunity to make independent nursing care decisions									
11	There is clear description of nurses roles and responsibilities									
III	**Nurse Manager Ability, Leadership, and Support of Nurses**									
12	The head nurse has good managerial and leadership									
13	The head nurse backs up the nursing staff in decision making, even if the conflict is with the physician.									
14	A head nurse is supportive of the nurses									
15	I get praise and recognition for a job well done									
16	Flexible work schedules are available									
IV	**Staffing and Resource Adequacy**									
17	There are sufficient registered nurses to provide quality patient care									
18	There is sufficient time and opportunity to discuss patient care problems.									
19	I have sufficient access to adequate information required to provide good patient care									
20	There is adequate time to guide students and new recruits									
21	There is adequate time to consult other professionals									
22	There is adequate supply of material resources to provide quality patient care									
V	**Collegial Nurse–Physician-Team Relations**									
23	Physicians and nurses have good team relationships									
24	There is a lot of teamwork between nurses and doctors									
25	There is adequate respect for team members									
26	There is good relationships with other team members									

Comments/ Suggestions:

EMOTIONAL INTELLIGENCE SCALE

Emotional Intelligence: Adapted from the Wong and Law Emotional Intelligence Scale (WLEIS) 2002; (Law, Wong & Song. The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study; The Leadership Quarterly 13 (2002) 243–274.

Instructions in original scale: Indicate the extent to which each item applies to you using the following scale:
1= strongly disagree; 2= disagree; 3= neither disagree nor agree; 4= agree; 5= strongly agree.

No.	Dimension
I	**Others' Emotional Appraisal (OEA);**
1	I always know my friends' emotions from their behavior.
2	I am a good observer of others' emotions.
3	I am sensitive to the feelings and emotions of others.
4	I have good understanding of the emotions of people around me.
II	**Regulation of Emotion (ROE);**
5	I am able to control my temper and handle difficulties rationally.
6	I am quite capable of controlling my own emotions.
7	I can always calm down quickly when I am very angry
8	I have good control of my own emotions.
III	**Self Emotional Appraisal (SEA)**
9	I have a good sense of why I have certain feelings most of the time.
10	I have good understanding of my own emotions.
11	I really understand what I feel.
12	I always know whether or not I am happy
IV	**Use of Emotion (UOE)**
13	I always set goals for myself and then try my best to achieve them. 10.
14	I always tell myself I am a competent person.
15	I am a self-motivated person
16	I would always encourage myself to try my best.

Adapted Emotional Intelligence Scale

Instructions for respondents: Indicate the extent to which each item applies to you using the following scale by placing a tick mark in the columns provided against each item in the scale. The scoring of the scale is as follows:

1= strongly disagree; 2= disagree; 3= neither disagree nor agree; 4= agree; 5= strongly agree.

No.	Dimension	Relevance				Clarity			
		1	2	3	4	1	2	3	4
I	**Others' Emotional Appraisal (OEA);**								
1	I always know my **others'*** emotions from their behavior.								
2	I am a good observer of others' emotions.								
3	I am sensitive to the feelings and emotions of others.								
4	I have good understanding of the emotions of people around me.								
II	**Regulation of Emotion (ROE);**								
5	I am able to control my temper and handle difficulties rationally.								
6	I am quite capable of controlling my own emotions.								
7	I can always calm down quickly when I am very angry.								
8	I have good control of my own emotions.								
III	**Self Emotional Appraisal (SEA)**								
9	I have a good sense of why I have certain feelings								

	most of the time.								
10	I have good understanding of my own emotions								
11	I really understand what I feel.								
12	I always know whether or not I am happy								
IV	**Use of Emotion (UOE)**								
13	I always **use my emotions to*** sets goals for myself								
14	I always **use my emotions to*** tell myself that I am a competent person.								
15	I **use my emotions to be*** a self-motivated person								
16	I always **use my emotions to*** encourage myself to try my best.								
Comments/ Suggestions:									

*these words will be added

JOB SATISFACTION SCALE

Job Satisfaction: The overall pleasurable or positive emotional state resulting from the appraisal of one's job experiences

Job Satisfaction Scale: Adapted from the Minnesota Satisfaction Questionnaire. (Weiss, D. J. , Dawis, R. V. England, G. W. and Lofquist, L. H. (1967), Manual for the Minnesota Satisfaction Questionnaire. Vol. 22, Minnesota Studies in Vocational Rehabilitation, Minneapolis: University of Minnesota, Industrial Relations Center).

Instructions in the Original Tool: Indicate the extent to which each item applies to you using the following scale: **1= very dissatisfied; 2 =dissatisfied; 3 =can't decide; 4 =satisfied; 5 =very satisfied**

	Job Satisfaction
	How satisfied are you with this aspect of your job
I	**Intrinsic**
1	Being able to keep busy all the time
2	The chance to work alone on the job.
3	The chance to do different things from time to time.
4	The chance to be somebody in the community
5	Being able to do things that don't go against your conscience.
6	The way your job provides for steady employment.
7	The chance to do things for other people.
8	The chance to tell people what to do.
9	The chance to do something that makes use of your abilities.
10	The freedom to use your own judgment
11	The chance to try your own methods of doing the job
12	The feeling of accomplishment you get from the job.
II	**Extrinsic**
13	The way my boss handles his/her workers.

14	The competence of my supervisor in making decisions
15	The way company policies are put into practice.
16	My pay and the amount of work I do.
17	The chances for advancement on this job.
18	The praise I get for doing a good job.
III	**General**
19	The working conditions.
20	The way my co-workers get along with each other.

Adapted Job Satisfaction Scale:

Instructions for respondents: Indicate the extent to which you are satisfied with the aspects of your job described in each item in the following scale by placing a tick mark in the columns provided against the items in the scale. The scoring of the scale is as follows:

1= very dissatisfied; 2 =dissatisfied; 3 =can't decide; 4 =satisfied; 5 =very satisfied

		Job Satisfaction	Relevance				Clarity			
			1	2	3	4	1	2	3	4
	How satisfied are you with this aspect of your job									
I	**Intrinsic Satisfaction**									
1	Being able to keep busy all the time									
2	The chance to work alone on the job.									
3	The chance to do different things from time to time.									
4	The chance to be somebody in the community									
5	Being able to do things that don't go against your conscience.									
6	The way your job provides for steady employment.									
7	The chance to do things for other people.									
8	The chance to tell people what to do.									
9	The chance to do something that makes use of your abilities.									
10	The freedom to use your own judgment									
11	The chance to try your own methods of doing the job									
12	The feeling of accomplishment you get from the job.									
II	**Extrinsic Satisfaction**									
13	The way your **supervisor*** handles **the nurses***.									
14	The competence of your supervisor in making decisions.									
15	The way **hospital*** policies are put into practice.									
16	Your pay and the amount of work you do.									
17	The chances for advancement on this job.									
18	The praise you get for doing a good job.									
III	**General Satisfaction**									
19	The working conditions.									
20	The way your co-workers get along with each other									
Comments/ Suggestions:										

*these words will be added

APPENDIX H

CONTENT VALIDITY INDICES

Item-CVI, Dimension-CVI, Scale-CVI

	Nurse Professionalism Scale	Relevance			Clarity		
	Dimensions	**I-CVI**	**D-CVI**	**S-CVI**	**I-CVI**	**D-CVI**	**S-CVI**
I	**Professional Responsibility and Accountability.**						
1	I have a sense of self-worth as a nurse professional and nurture it.	.93			.93		
2	I maintain standards of conduct which add to the respect/status of the profession	.93			.86		
3	I carry out nursing responsibilities within the framework of professional boundaries.	.86			1		
4	I accept accountability for maintaining practice standards set by Indian Nursing Council	.86			1		
5	I accept accountability for my own decisions and actions.	.93			.93		
6	I am compassionate while performing the nursing care activities	.93			.86		
7	I take responsibility for continuous improvement of current nursing care practices.	1			.93		
8	I provide adequate information to patients and significant others that allows them to make informed choices.	.93			.93		
9	I practice healthy behaviour.	.93	**.92**		.93	**.93**	
II	**Nursing Practice**						
10	I provide care in accordance with set standards of practice.	.93			1		
11	I treat patients and their significant others with human dignity while providing holistic nursing care.	.93			.93		
12	I respect the traditional and cultural practices of patients and their significant others while promoting healthy practices and discouraging harmful practices.	1			.86		
13	I present realistic and truthful picture in all situations to facilitate autonomous/independent decision-making by patients and their significant others.	.93			1		
14	I promote participation of patients and their significant others in the care	.86			1		
15	I ensure safe practice of care for self and patients.	1			.86		
16	I consult with team members and follow up appropriately when patients care needs exceed my competence.	1	**.95**		.93	**.94**	
III	**Communication and Interpersonal Relationships**						
17	I establish and maintain effective interpersonal relationships with patients and their significant	.93			1		

#		C1	C2	C3	C4	C5	C6
	others.						
18	I respect and maintain effective interpersonal relationship with team members.	.93			.93		
19	I acknowledge the professional role of team members	.93			.93		
20	I cooperate with other health professionals to meet the needs of the patients and their significant others.	.86	**.91**		.93	**.94**	
IV	**Valuing Human Being**						
21	I take appropriate action to protect patients from harmful and unethical practice.	.93			1		
22	I consider relevant facts while taking decisions in the best interest of patients.	.93			.93		
23	I encourage and support patients in their right to speak for themselves on issues affecting their health and welfare.	.93			1		
24	I respect and support choices made by patients.	.86	**.91**		.93	**.96**	
V	**Management**						
25	I ensure appropriate allocation and utilization of available resources.	.93			1		
26	I participate in supervision and education of students	1			1		
27	I use judgment in relation to individual competence while delegating responsibility to colleagues, patients and relatives.	1			1		
28	I facilitate conducive work culture in order to achieve patient care objectives.	1			1		
29	I communicate effectively with superiors, team members and subordinates following appropriate channels of communication.	1			1		
30	I participate in the performance appraisal of self and others.	.86			1		
31	I participate in the evaluation of nursing services.	1			1		
32	I participate in policy decisions related to patient care services	.93			.93		
33	I work with patients to identify their needs and sensitize policy makers and funding agencies for resource allocation.	.93	**.96**		.93	**.98**	
VI	**Professional Advancement**						
34	I ensure the protection of the human rights while pursuing the advancement of knowledge.	1			.93		
35	I contribute to the development of nursing practice.	1			.86		
36	I participate in determining and implementing quality care.	1			.93		
37	I take responsibility for updating my own knowledge and competencies.	.93			1		
38	I contribute to core of professional knowledge by conducting and participating in research.	1	**.99**	**.94**	1	**.94**	**.95**

	Nurse Practice Environment Scale	Relevance			Clarity		
	Dimensions	I-CVI	D-CVI	S-CVI	I-CVI	D-CVI	S-CVI
I	**Nurse Participation in Hospital Affairs**						
1	I have opportunity to participate in hospital policy decisions and nursing department committees	1			1		
2	The administration listens and responds to staff on daily problems and procedures	1			1		
3	The matron is equal in power and authority to other top level hospital executives	1			1		
4	The matron is always visible and accessible to staff	.93	**.98**		.93	**.98**	
II	**Foundations for Nursing Quality of Care**						
5	There is quality assurance program which helps in maintaining and improving quality of nursing care	1			1		
6	There is orientation program for newly hired nurses	1			1		
7	There is a clear philosophy of nursing that permeates the patient care environment	1			.93		
8	There are in-service/continuing education programs for nurses	1			.93		
9	I have opportunity to work with nurses who are clinically competent	.93			1		
10	I have opportunity to make independent nursing care decisions	.93			1		
11	There is clear description of nurses roles and responsibilities	1	**.98**		1	**.99**	
III	**Nurse Manager Ability, Leadership, and Support of Nurses**						
12	The head nurse has good managerial and leadership ability	1			1		
13	The head nurse backs up the nursing staff in decision making, even if the conflict is with the physician.	1			1		
14	A head nurse is supportive of the nurses	1			1		
15	I get praise and recognition for a job well done	1			1		
16	Flexible work schedules are available	1	**1**		1	**1**	
IV	**Staffing and Resource Adequacy**						
17	There are sufficient registered nurses to provide quality patient care	.93			1		
18	There is sufficient time and opportunity to discuss patient care problems.	1			1		
19	I have sufficient access to adequate information required to provide good patient care	1			1		
20	There is adequate time to guide students and new recruits	1			1		

21	There is adequate time to consult other professionals if necessary	1			1		
22	There is adequate supply of material resources to provide quality patient care	1	.98		1	1	
V	**Collegial Nurse–Physician-Team Relations**						
23	Physicians and nurses have good team relationships	1			1		
24	There is a lot of teamwork between nurses and doctors	1			1		
25	There is adequate respect for team members	1			1		
26	There is good relationships with other team members	1	1	.98	1	1	.99

	Nurses' Perception about Stakeholders' Image of a Nurse									Relevance			Clarity		
No	**Dimensions**									I-CVI	D-CVI	S-CVI	I-CVI	D-CVI	S-CVI
	I Think the public view nurses as being														
I	**Interpersonal Power**														
1	Powerful	1	2	3	4	5	6	7	Submissive	.93			.93		
2	Confident	1	2	3	4	5	6	7	Uncertain	1			1		
3	Intelligent	1	2	3	4	5	6	7	Unintelligent	1			.86		
4	Independent	1	2	3	4	5	6	7	Dependent	1			.93		
5	Competent	1	2	3	4	5	6	7	Incompetent	1	.99		.93	.93	
II	**Interpersonal Relations**														
6	Caring	1	2	3	4	5	6	7	Indifferent	1			1		
7	Friendly	1	2	3	4	5	6	7	Unfriendly	1			1		
8	Respectful	1	2	3	4	5	6	7	Rude	1			1		
9	Responsible	1	2	3	4	5	6	7	Irresponsible	1			1		
10	Collaborative	1	2	3	4	5	6	7	Uncooperative	.93	.99		.86	.97	
III	**Intrapersonal Ability**														
11	Organized	1	2	3	4	5	6	7	Disorganized	1			1		
12	Logical	1	2	3	4	5	6	7	Unreasonable	1			1		
13	Punctual	1	2	3	4	5	6	7	Unpredictable	1			1		
14	Honest	1	2	3	4	5	6	7	Dishonest	1	1	.99	1	1	.96

	Emotional Intelligence Scale	I-CVI	D-CVI	S-CVI	I-CVI	D-CVI	S-CVI
No.	**Dimension**						
I	**Others' Emotional Appraisal (OEA);**						
1	I always know my others' emotions from their behavior.	1			.87		
2	I am a good observer of others' emotions.	1			1		
3	I am sensitive to the feelings and emotions of others.	1			1		
4	I have good understanding of the emotions of	1	1		1	.97	

No.		I-CVI	D-CVI	S-CVI	I-CVI	D-CVI	S-CVI
	people around me.						
II	**Regulation of Emotion (ROE);**						
5	I am able to control my temper and handle difficulties rationally.	1			1		
6	I am quite capable of controlling my own emotions.	1			1		
7	I can always calm down quickly when I am very angry.	1			1		
8	I have good control of my own emotions.	**1**	**1**		1	**1**	
III	**Self Emotional Appraisal (SEA)**						
9	I have a good sense of why I have certain feelings most of the time.	1			1		
10	I have good understanding of my own emotions	1			1		
11	I really understand what I feel.	1			1		
12	I always know whether or not I am happy	1	**1**		1	**1**	
IV	**Use of Emotion (UOE)**						
13	I always set goals for myself and try my best to achieve them	1			.87		
14	I always tell myself that I am a competent person.	1			.87		
15	I am a self-motivated person	1			.87		
16	I always encourage myself to perform well.	1	**1**	**1**	.87	**.87**	**.96**

	Job Satisfaction Scale	I-CVI	D-CVI	S-CVI	I-CVI	D-CVI	S-CVI
	Dimensions						
No.	How satisfied are you with this aspect of your job						
I	**Intrinsic Satisfaction**						
1	Being able to keep busy all the time	1			1		
2	The chance to work alone on the job.	1			1		
3	The chance to do different things from time to time.	1			1		
4	The chance to be somebody in the community	1			1		
5	Being able to do things that don't go against your conscience.	1			1		
6	The way your job provides for steady employment.	1			1		
7	The chance to do things for other people.	1			1		
8	The chance to tell people what to do.	1			1		
9	The chance to do something that makes use of your abilities.	**1**			1		
10	The freedom to use your own judgment	1			1		
11	The chance to try your own methods of doing the job	1			1		
12	The feeling of accomplishment you get from the job.	1	**1**		1	**1**	
II	**Extrinsic Satisfaction**						
13	The way your supervisor handles the nurses.	1			1		
14	The competence of your supervisor in making decisions.	1			1		
15	The way hospital policies are put into practice.	1			1		
16	Your pay and the amount of work you do.	1			1		
17	The chances for advancement on this job.	1			1		

18	The praise you get for doing a good job.	1	**1**		1	**1**	
III	**General Satisfaction**						
19	The working conditions.	1			1		
20	The way your co-workers get along with each other	1	**1**	**1**	1	**1**	**1**

	Demographic Variables	I-CVI	D-CVI	S-CVI	I-CVI	D-CVI	S-CVI
1	Age	1			1		
2	Gender	1			1		
3	Marital Status	1			1		
4	Religion	1			1		
5	Qualification	1			1		
6	Area of work	1			1		
7	Employment status	1			1		
8	Years of Experience	1			1		
9	Sector	1			1		
10	Level of Organization	1	**1**	**1**	1	**1**	**1**

APPENDIX I

NURSE PROFESSIONALISM SCALE

Professionalism: The demonstration of behaviours by a nurse in accordance with the Professional code of conduct by the Indian Nursing Council.

Instructions for respondents: This tool contains items which describe your professional behaviour while performing your roles and responsibilities related to the patient care activities. You are required to tick mark in the appropriate column against the six options for each item which are scored as follows:

0=Not Applicable; 1=Never; 2=Rarely; 3=Sometimes; 4=Mostly and 5=Always.

	Nurse:	0	1	2	3	4	5
No.	**Dimensions**	**0**	**1**	**2**	**3**	**4**	**5**
I	**Professional Responsibility and Accountability.**						
1	I have a sense of self-worth as a nurse professional and nurture it.						
2	I maintain standards of conduct which add to the respect/status of the profession.						
3	I carry out nursing responsibilities within the framework of professional boundaries.						
4	I accept accountability for maintaining practice standards set by Indian Nursing Council						
5	I accept accountability for my own decisions and actions.						
6	I am compassionate while performing the nursing care activities						
7	I take responsibility for continuous improvement of current nursing care practice.						
8	I provide adequate information to patients and significant others that allows them to make informed choices.						
9	I practice healthy behaviour.						
II	**Nursing Practice**						
10	I provide care in accordance with set standards of practice.						
11	I treat patients and their significant others with human dignity while providing holistic nursing care.						
12	I respect the traditional and cultural practices of patients and their significant others while promoting healthy practices and discouraging harmful practices.						
13	I present realistic and truthful picture in all situations to facilitate autonomous/independent decision-making by patients and their significant others.						
14	I promote participation of patients and their significant others in the care						
15	I ensure safe practice of care for self and patients.						
16	I consult with team members and follow up appropriately						

		when patients care needs exceed my competence.						
III	**Communication and Interpersonal Relationships**							
17	I establish and maintain effective interpersonal relationships with patients and their significant others.							
18	I respect and maintain effective interpersonal relationship with team members.							
19	I acknowledge the professional role of team members							
20	I cooperate with other health professionals to meet the needs of the patients and their significant others.							
IV	**Valuing Human Being**							
21	I take appropriate action to protect patients from harmful and unethical practice.							
22	I consider relevant facts while taking decisions in the best interest of patients.							
23	I encourage and support patients in their right to speak for themselves on issues affecting their health and welfare.							
24	I respect and support choices made by patients.							
V	**Management**							
25	I ensure appropriate allocation and utilization of available resources.							
26	I participate in supervision and education of students							
27	I use judgment in relation to individual competence while delegating responsibility to colleagues, patients and relatives.							
28	I facilitate conducive work culture in order to achieve patient care objectives.							
29	I communicate effectively with superiors, team members and subordinates following appropriate channels of communication.							
30	I participate in the performance appraisal of self and others.							
31	I participate in the evaluation of nursing services.							
32	I participate in policy decisions related to patient care services							
33	I work with patients to identify their needs and sensitize policy makers and funding agencies for resource allocation.							
VI	**Professional Advancement**							
34	I ensure the protection of the human rights while pursuing the advancement of knowledge.							
35	I contribute to the development of nursing practice.							
36	I participate in determining and implementing quality care.							
37	I take responsibility for updating my own knowledge and competencies.							
38	I contribute to core of professional knowledge by conducting and participating in research.							

NURSE PRACTICE ENVIRONMENT SCALE

Nurse Practice Environment: The organizational characteristics of the work setting that facilitate or constrain professional nursing practice/professionalism among nurses.

Instructions for respondents: Indicate the extent to which each item applies to your practice environment using the following scale:
1= Strongly Disagree; 2= Disagree; 3= Neutral: 4= Agree; 5= Strongly Agree

	In My Work Practice Environment					
No.	Dimension	1	2	3	4	5
I	**Nurse Participation in Hospital Affairs**					
1	I have opportunity to participate in hospital policy decisions and nursing department committees					
2	The administration listens and responds to staff on daily problems and procedures					
3	The matron is equal in power and authority to other top level hospital executives					
4	The matron is always visible and accessible to staff					
II	**Foundations for Nursing Quality of Care**					
5	There is quality assurance program which helps in maintaining and improving quality of nursing care					
6	There is orientation program for newly hired nurses					
7	There is a clear philosophy of nursing that permeates the patient care environment					
8	There are in-service/continuing education programs for nurses					
9	I have opportunity to work with nurses who are clinically competent					
10	I have opportunity to make independent nursing care decisions					
11	There is clear description of nurses roles and responsibilities					
III	**Nurse Manager Ability, Leadership, and Support of Nurses**					
12	The head nurse has good managerial and leadership ability					
13	The head nurse backs up the nursing staff in decision making, even if the conflict is with the physician.					
14	A head nurse is supportive of the nurses					
15	I get praise and recognition for a job well done					
16	Flexible work schedules are available					
IV	**Staffing and Resource Adequacy**					
17	There are sufficient registered nurses to provide quality patient care					
18	There is sufficient time and opportunity to discuss patient care problems.					
19	I have sufficient access to adequate information required to provide good patient care					
20	There is adequate time to guide students and new recruits					
21	There is adequate time to consult other professionals if necessary					
22	There is adequate supply of material resources to provide					

		quality patient care					
V	**Collegial Nurse–Physician-Team Relations**						
23	Physicians and nurses have good team relationships						
24	There is a lot of teamwork between nurses and doctors						
25	There is adequate respect for team members						
26	There is good relationships with other team members						

NURSES' PERCEPTION ABOUT STAKEHOLDERS' IMAGE OF A NURSE

SCALE

Nurses' Perception about Stakeholders' Image of a Nurse refers to the nurses' perception and beliefs of how they are viewed by the stakeholders; namely doctors, patients, other hospital staff, and by themselves within their working environment with respect to the nurse's interpersonal power, interpersonal relations and intrapersonal ability.

Instructions for respondents: Items contained in the questionnaire are unipolar adjectives describing a professional nurse. In this section, using this questionnaire you are required to rate your perception about the different stakeholders' image of a nurse.

Please indicate by encircling an appropriate number that reflects your opinion with respect to each item in the specified columns which will be interpreted as follows:
1= Strongly Disagree; 2= Disagree; 3= Neutral: 4= Agree; 5= Strongly Agree

No		Perception about Doctors' Image of a nurse	Perception about Patients' Image of a nurse	Perception about Other hospital staffs' Image of a nurse	Self Perception about Image of a nurse
I	**Inter-Personal Power**				
1	Submissive	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
2	Confident	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
3	Unintelligent	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
4	Independent	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
5	Competent	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
II	**Inter-Personal Relations**				
6	Caring	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
7	Unfriendly	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
8	Rude	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
9	Responsible	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
10	Uncooperative	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
III	**Intra-Personal**				

	Ability																				
11	Disorganized	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
12	Logical	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
13	Punctual	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
14	Dishonest	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5

EMOTIONAL INTELLIGENCE SCALE

Emotional Intelligence: The ability to perceive, understand, regulate and manage self and others' emotions while coping with environmental pressure and demands.

Instructions for respondents: Indicate the extent to which each item applies to you using the following scale:
1= Strongly Disagree; 2= Disagree; 3= Neutral; 4= Agree; 5= Strongly Agree.

No.	Dimension	1	2	3	4	5
I	**Others' Emotional Appraisal (OEA)**					
1	I always know my others' emotions from their behavior.					
2	I am a good observer of others' emotions.					
3	I am sensitive to the feelings and emotions of others.					
4	I have good understanding of the emotions of people around me.					
II	**Regulation of Emotion (ROE)**					
5	I am able to control my temper and handle difficulties rationally.					
6	I am quite capable of controlling my own emotions.					
7	I can always calm down quickly when I am very angry.					
8	I have good control of my own emotions.					
III	**Self Emotional Appraisal (SEA)**					
9	I have a good sense of why I have certain feelings most of the time.					
10	I have good understanding of my own emotions					
11	I really understand what I feel.					
12	I always know whether or not I am happy					
IV	**Use of Emotion (UOE)**					
13	I always use my emotions to sets goals for myself					
14	I always use my emotions to tell myself that I am a competent person.					
15	I use my emotions to be a self-motivated person					
16	I always use my emotions to encourage myself to perform well.					
	SOCIAL DESIRABILITY RESPONDING SCALE **(incorporated in Emotional Intelligence Scale for Data Collection)**					
1	I am always kind even to people who do not agree with me					
2	There have been occasions when I took advantage of someone					
3	I sometimes try to be even rather than forgive and forget					
4	I sometimes feel upset (angry) when I do not get the way I want					
5	No matter whom I am talking to, I am always a good listener					

JOB SATISFACTION SCALE

Job Satisfaction: The overall pleasurable or positive emotional state resulting from the appraisal of one's job experiences.

Instructions: Indicate the extent to which each item applies to you using the following scale:

1= Very Dissatisfied; 2 =Dissatisfied; 3 =Can't Decide; 4 =Satisfied; 5 =Very Satisfied

	How satisfied are you with this aspect of your job	1	2	3	4	5
I	**Intrinsic Satisfaction**					
1	Being able to keep busy all the time					
2	The chance to work alone on the job.					
3	The chance to do different things from time to time.					
4	The chance to be somebody in the community					
5	Being able to do things that don't go against your conscience.					
6	The way your job provides for steady employment.					
7	The chance to do things for other people.					
8	The chance to tell people what to do.					
9	The chance to do something that makes use of your abilities.					
10	The freedom to use your own judgment					
11	The chance to try your own methods of doing the job					
12	The feeling of accomplishment you get from the job.					
II	**Extrinsic Satisfaction**					
13	The way your supervisor handles the nurses.					
14	The competence of your supervisor in making decisions.					
15	The way hospital policies are put into practice.					
16	Your pay and the amount of work you do.					
17	The chances for advancement on this job.					
18	The praise you get for doing a good job.					
III	**General Satisfaction**					
19	The working conditions.					
20	The way your co-workers get along with each other					

DEMOGRAPHIC DATA

Instructions: Kindly provide information/tick mark against **the most suitable** option given against the variables.

Age in years:

Gender: Male/Female

Marital status: Married/Single

Religion: Christian/Hindu/Muslim/ Others

Qualification: GNM/B.Sc./M.Sc.

Area of work: Medicine/Surgery/Obstetrics/Paediatric/ICU - OT/Psychiatry/Community

Level of organisation: Tertiary/ Secondary/ Primary
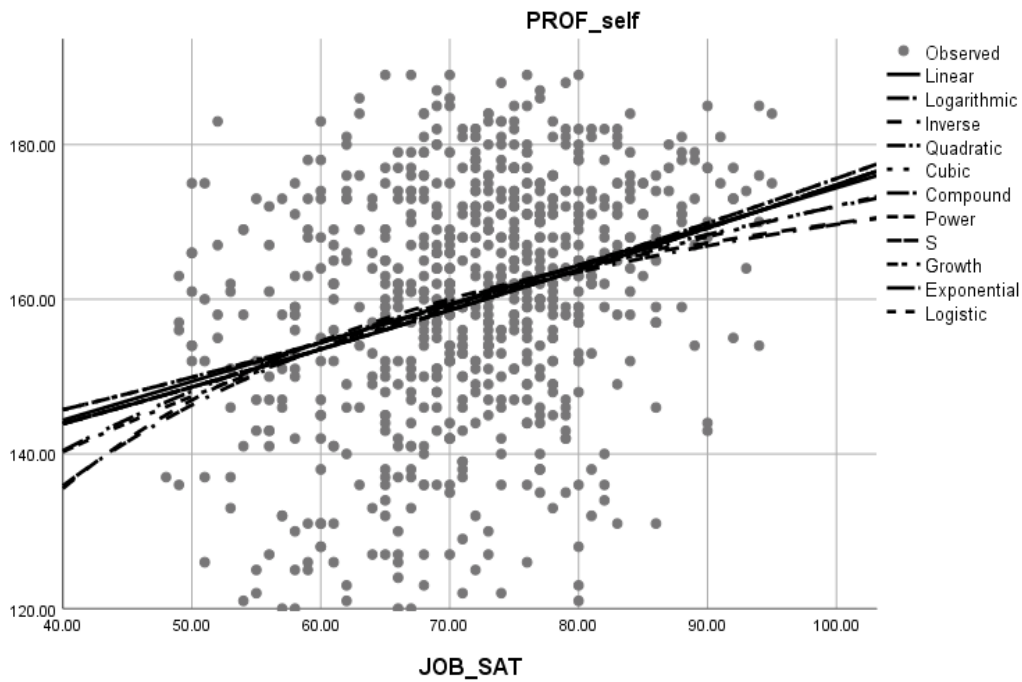
Employment status: Permanent/temporary

Years of experience:

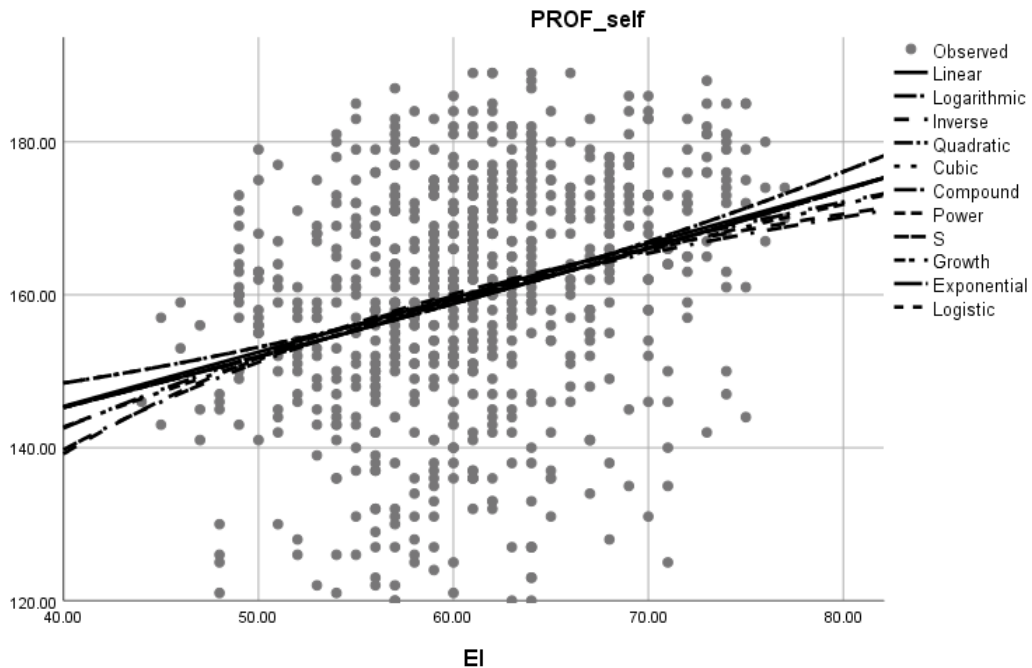**Sector:** Private /Government/Semi-government/Defence.
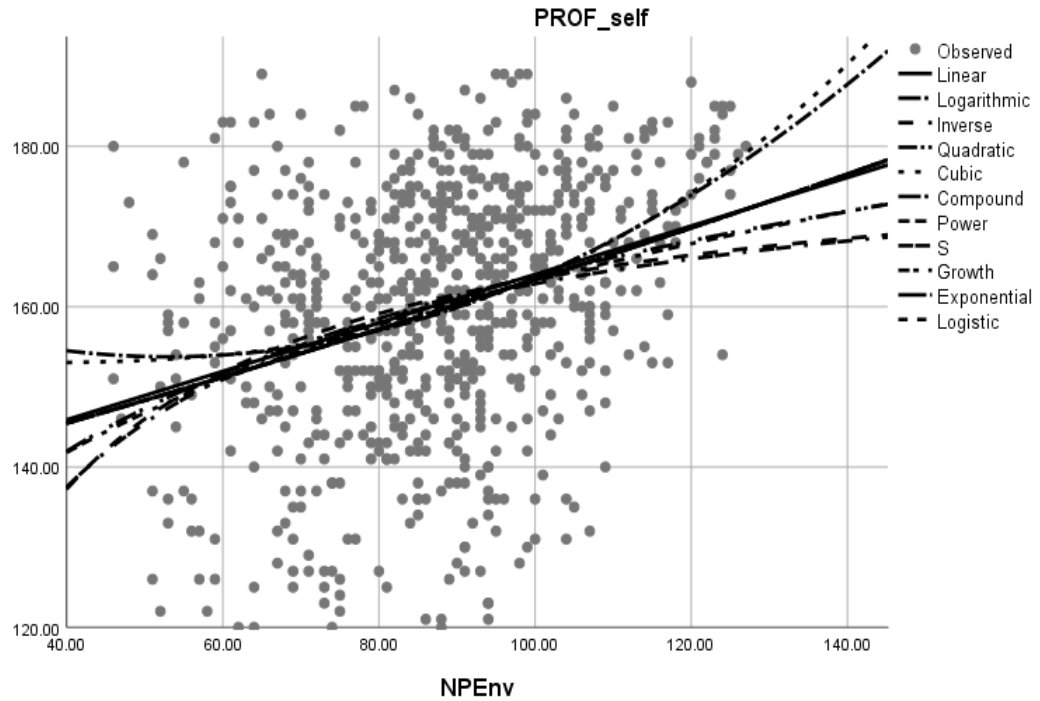
APPENDIX J

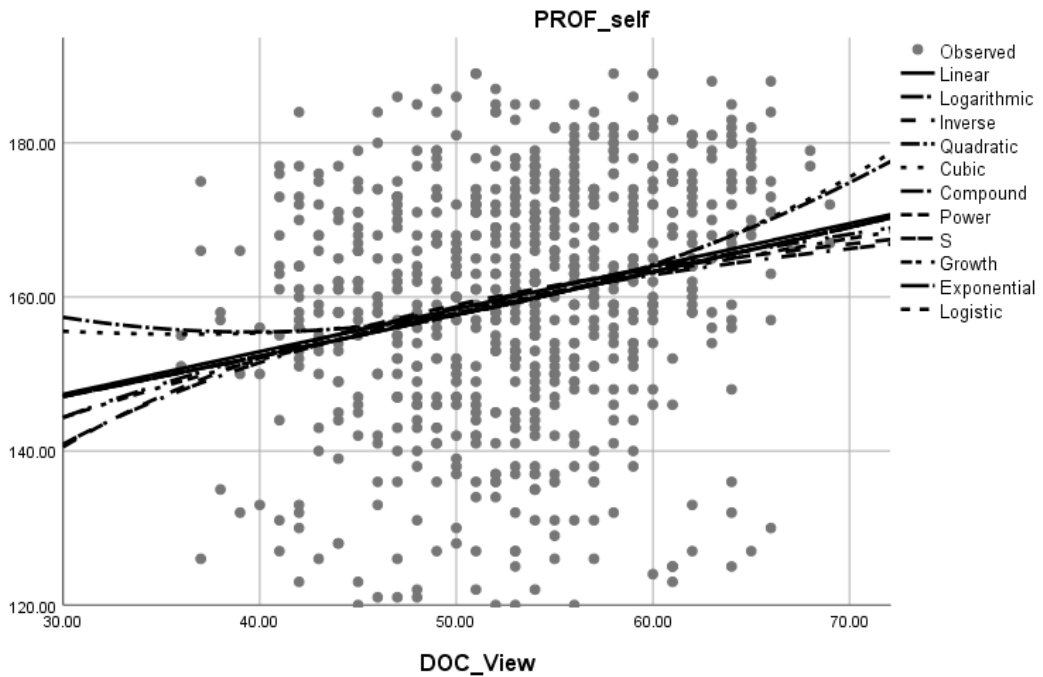# LINEARITY GRAPHS

1.   Professionalism and Job Satisfaction

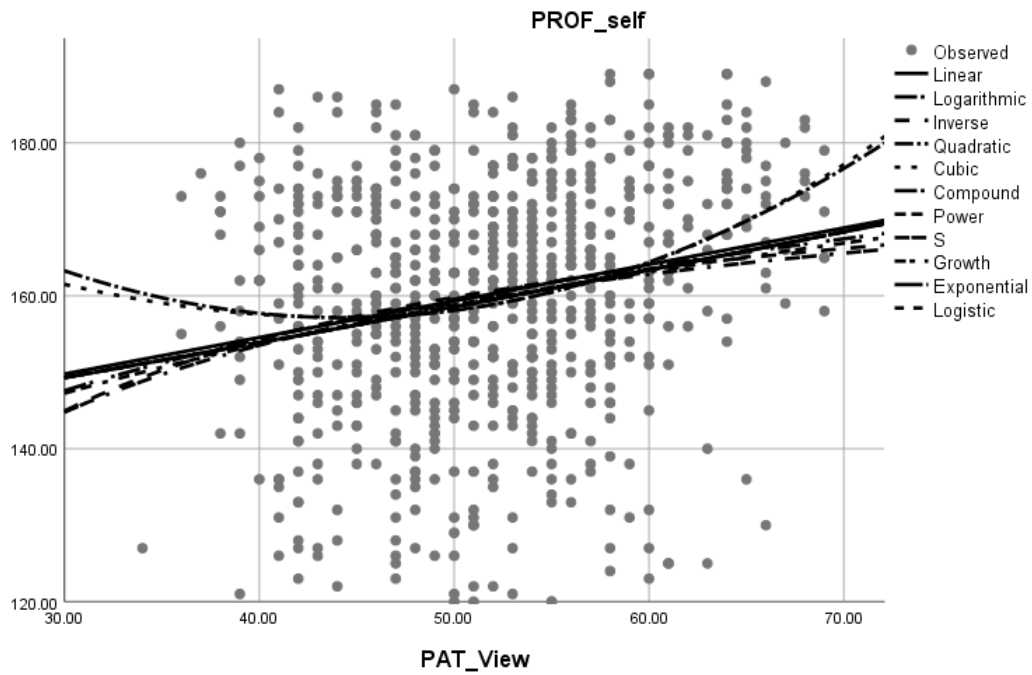**2.   Professionalism and Emotional Intelligence**

3. Professionalism and Nurse Patient Environment
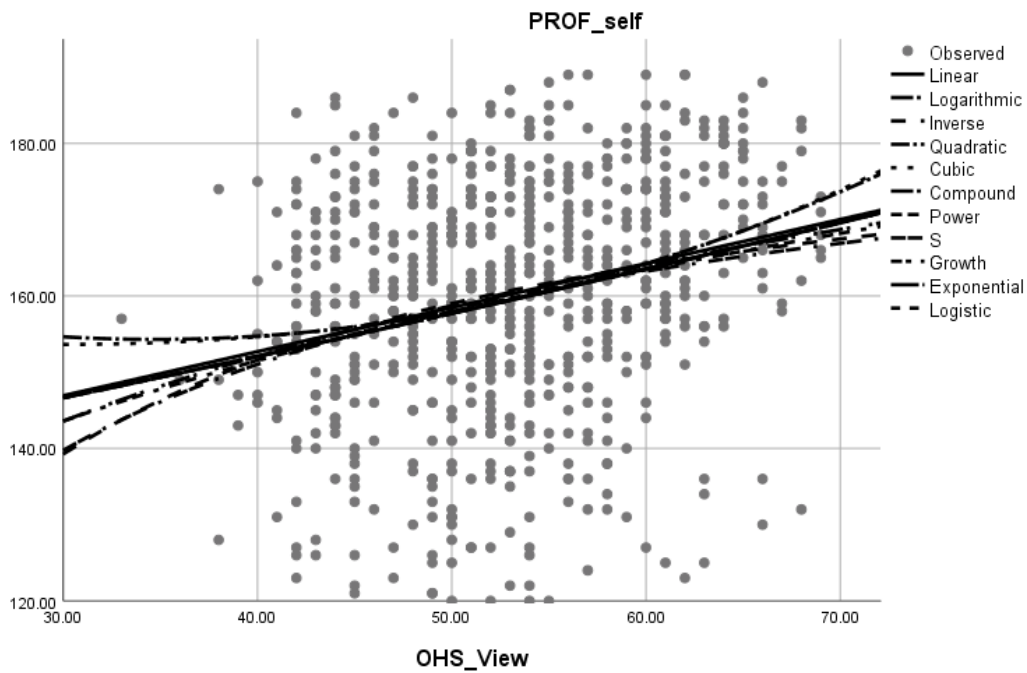

PROF_self

4. Professionalism and Nurses' Perception about Doctors' Image of a Nurse
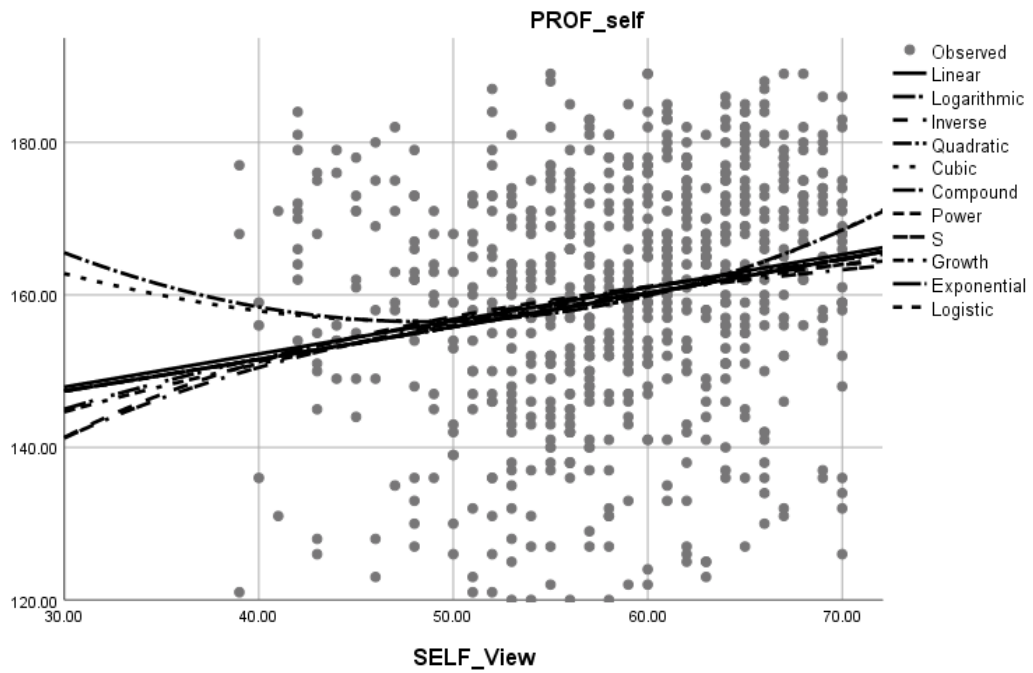

PROF_self

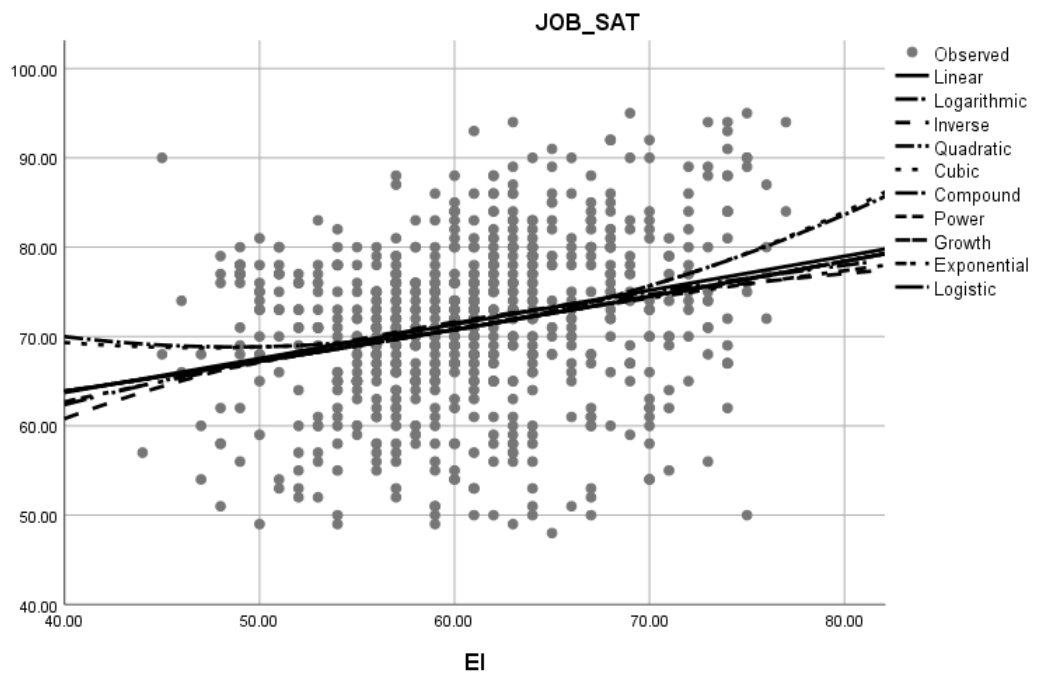## 5. Professionalism and Nurses' Perception about Patients' Image of a Nurse

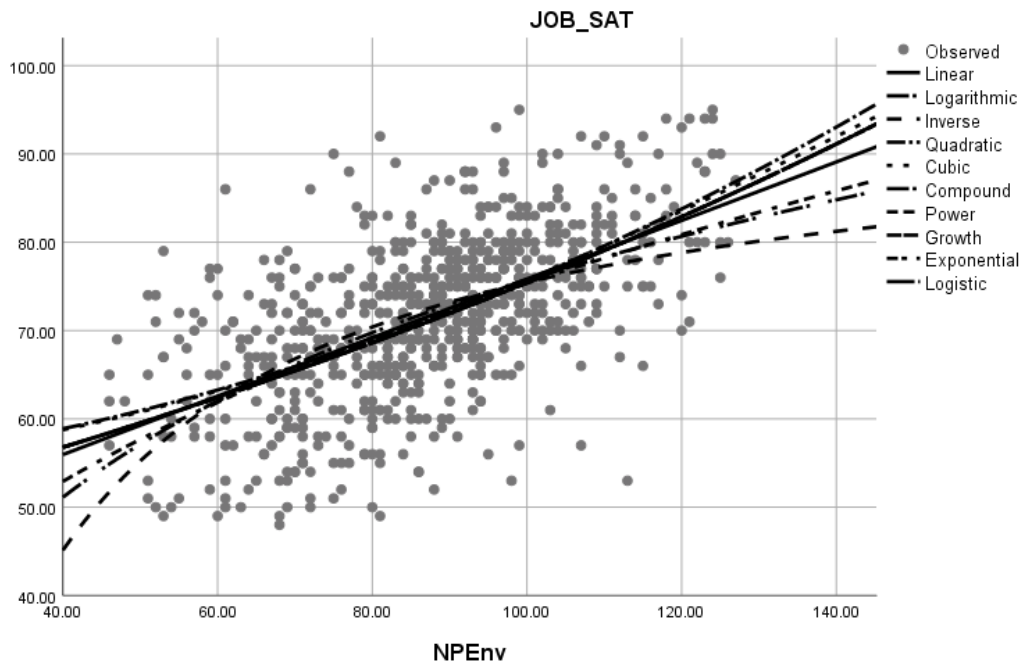## 6. Professionalism and Nurses' Perception about Other Hospital Staffs' Image of a Nurse

7. Professionalism and Nurses' Perceived Image of a Nurse
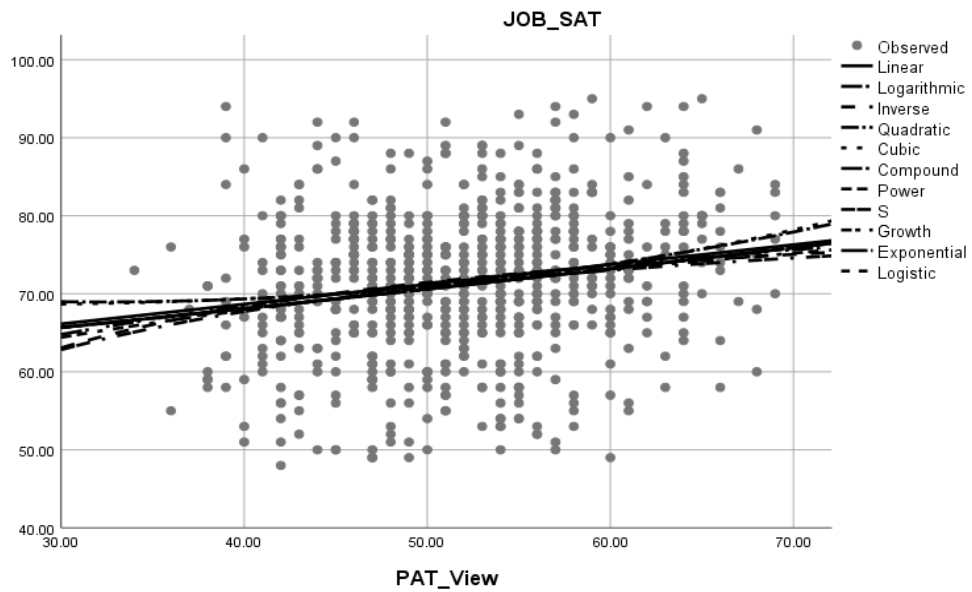

8. Job Satisfaction and Emotional Intelligence

9. **Job Satisfaction and Nurse Practice Environment**
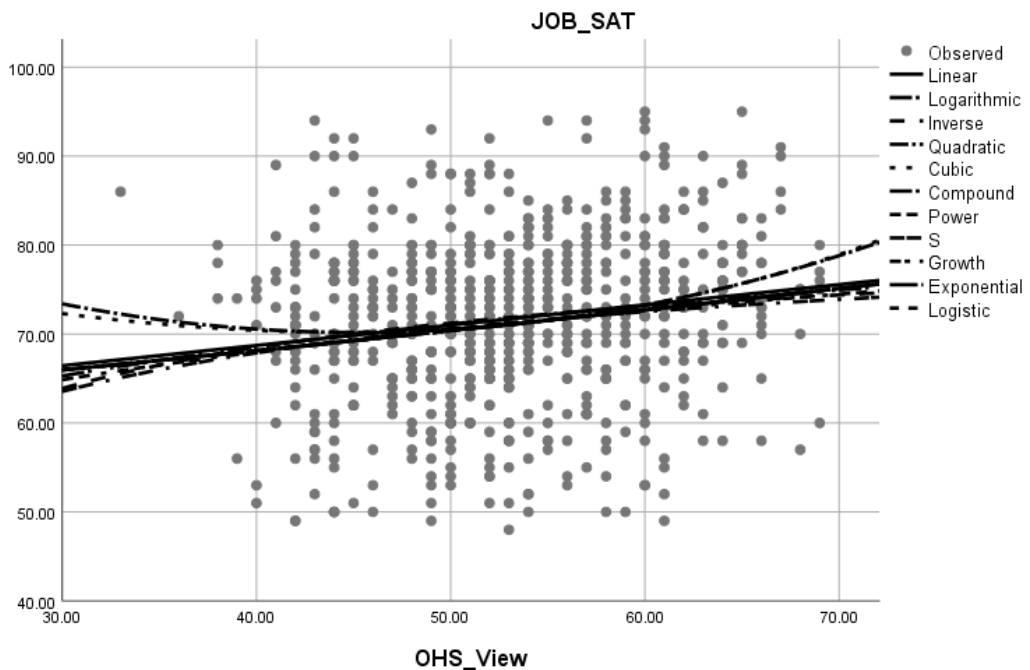

10. **Job Satisfaction and Nurses' Perception about Doctors' Image of a Nurse**
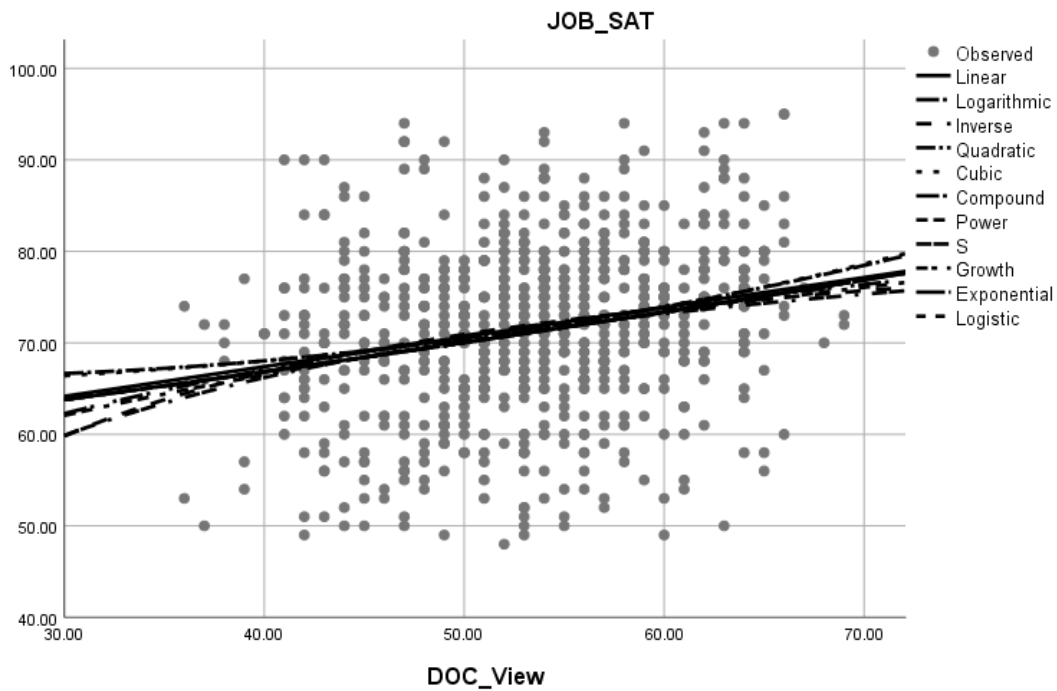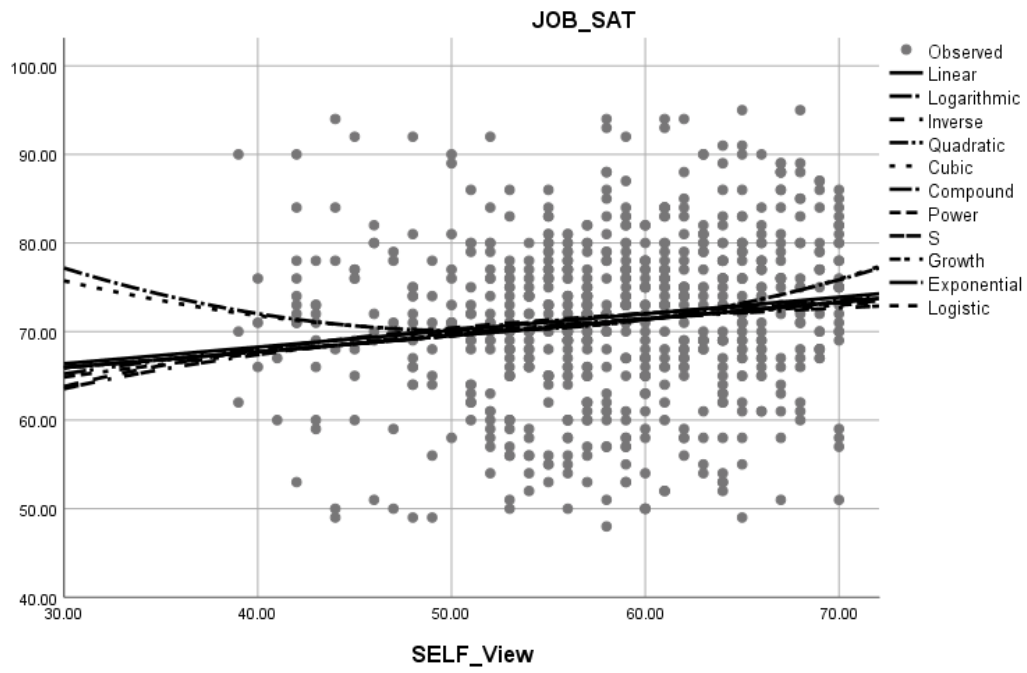
11. **Job Satisfaction and Nurses' Perception about Patients' Image of a Nurse**

12. **Job Satisfaction and Nurses' Perception about Other Hospital Staffs' Image of a Nurse**

13. Job Satisfaction and Nurses' Perceived Image of a Nurse

APPENDIX K

PUBLICATIONS FROM THIS RESEARCH WORK

1.   **Paper Title**: Image of nurse and Nursing image of nurse and nursing: Influencing Career Choice and Development among Nursing Students in a selected Institute of Goa.

Co-author: R. Nirmala.

Journal: Indian Journal of Advanced Nursing. Vol. 1(3); July-Sept 2015; p:1-9. ISSN online (2394-7160), ISSN print (2319-815X). **Research Paper Indexed by** Citefactor Index -- 18

2.   **Paper Title**: Nurses Perception about the Public Image of a Nurse: An Exploratory Study.

Co-author: R. Nirmala.

Journal: International Journal of Innovative and Applied Research (IJIAR). Vol. 5(5); 2017; p: 97-104. ISSN 2348-0319. www.journalijiar.com

3.   **Paper Title**: Professionalism among Nurses: A concept analysis

Co-author: R. Nirmala.

Journal: International Journal of Business and Management Invention. Vol. 6(7); July. 2017. P: 60-66. ISSN Online: 2319 – 8028, ISSN Print: 2319 – 801X. www.ijbmi.org. UGC approval : **SI. N. 4485; Journal No. 46889**

4.   **Paper Title**: Perceived Public Image of a Nurse and Work Meaningfulness among Nurses.

Co-author: R. Nirmala.

Journal: International Journal of Nursing Education. July-September 2018. Vol. 10(3);   p: 1-5. ISSN-0974-9349 (Print) ISSN-0974-9357. DOI Number: 10.5958/0974-9357.2018.00056.9.

5.   **Paper Title**: Nurse Professionalism Scale: Development and Psychometric Evaluation. (Accepted for publication: Nursing Journal of India, The Trained Nurses Association of India).

Co-author: R. Nirmala.

6. **Paper Title**: Nurses' Perception about Stakeholders' Image of a Nurse.

Journal: (Accepted for publication: Journal of Health and Allied Sciences, Nitte University).

Co-author: R. Nirmala.

7. **Paper Title**: Professionalism among Nurses: A Multisource Feedback.

Journal: (Under Review: Nursing Ethics).

Co-author: R. Nirmala.